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MOUNT ARBOR NURSERIES

ESTABLISHED 1875

E.S. WELCH PROP.

U.S. Department of Agriculture
Washington, D. C.





Hydrangea—Paniculata Grandiflora

Mount Arbor NURSERIES

E. S. WELCH, Prop.

Established 1875

Fruit and Ornamental Trees, Small
Fruits, Shrubs, Vines, Roses,
Perennials, Bulbs, Etc.

SPECIALTIES:

A full assortment of General Nursery
Stock in quantities to suit the buyer.

All goods packed under cover. Stock not exposed to wind and sun. We grow and propagate a large and complete line of General Nursery Stock.

Office and Packing Plant one block south of Wabash depot, six
blocks from business center.

SHENANDOAH, IOWA

The Fruit-Grower Press, St. Joseph, Mo.

NOTICE TO CUSTOMERS

Orders should always be placed early before assortments are broken. It is often impossible to procure varieties wanted if orders are delayed until planting time. We will reserve stock for orders at any time; ready for shipment when desired. Also will place stock in storage in the fall for winter or early spring shipment.

All orders should be written plainly on a separate sheet of paper.

We deliver all goods at railway or express office, taking receipts for all goods as shipped, after which purchasers must look to forwarders for all damage caused by delay or miscarriage in transit.

Plain shipping instructions should accompany all orders. When not given, we forward according to our best judgment, without assuming responsibility, as all goods travel at purchaser's risk.

Our shipping season in the fall begins about the first of October and continues throughout the winter and spring until in May.

Our storage facilities and equipment are such as to enable us to carry a large assortment of stock in storage during the winter and early spring so that shipments can be made when desired.

We paper-line all boxes in packing, and in the winter months double paper-line our boxes and pack with extra care to protect from frost.

GRADES—We grade carefully, in some cases by caliper, in others by height. When graded by both caliper and height the caliper must govern.

CAUTION—We accept all orders on the condition that they shall be void should injury befall our stock from frost, hail, fire or other causes over which we have no control.

CLAIMS for errors should be made promptly on receipt of goods, as we cannot rectify them unless promptly made.

GUARANTEE OF GENUINENESS—While we exercise the utmost diligence and care to have our varieties true to name, and hold ourselves in readiness on proper proof, to replace all trees, etc., that may prove otherwise, or refund the amount paid, it is mutually understood and agreed between the purchaser and ourselves that we shall in no case be liable for any sum greater than the amount originally received for said trees, etc., that prove untrue.

We consider varieties marked with a (*) as the most valuable.

Remember to address all correspondence to Mount Arbor Nurseries, or E. S. Welch; letters intended for us addressed otherwise often are seriously delayed or fail to reach us.

MOUNT ARBOR NURSERIES

LOCATION, FACILITIES, GROWTH OF BUSINESS, ETC.

In presenting this catalog we desire to extend our thanks for the past patronage of our many customers and solicit your many and valued orders in the future. No order is too small or too large to receive our most careful and prompt attention.

The Mount Arbor Nurseries were established in 1875, at a time when the business of growing Trees, Shrubs and Plants commercially was in its infancy. With the wonderful growth of the United States in population and wealth, there has developed an unlimited demand for Nursery Products. It has been our constant aim to keep pace with the progress of the country. The growth of the Mount Arbor Nurseries in its early history was gradual, but upon a substantial foundation.

In 1891 the business was reorganized under the present management. Since the reorganization it has made remarkable progress, having been enlarged and extended until the business has reached a position of prominence among the largest growers and shippers of Nursery Products in the United States. The volume of sales has increased from \$8,000.00 to over \$200,000.00 per annum. This condition has been brought about by the proprietor's close personal attention to the business, and untiring efforts to give every patron value received and just what he bought. We have been extremely fortunate in retaining our old patrons year after year, which fact of itself is sufficient advertisement to add many new customers.

We are located at Shenandoah, in Southwestern Iowa, the "Garden Spot of the Central States." Soil, climate and all conditions are the most favorable to the growing of nursery stock, producing that solid, firm texture of the wood, deep penetrating roots, and an abundance of strong fibrous roots, so necessary to the successful transplanting and future value of the trees.

Our shipping facilities are unexcelled. Situated on the C., B. & Q. Ry. and the Wabash Ry., each with numerous branches extending to all parts of the country, our shipments receive prompt service, reaching the customer in good condition.

OUR SUPERIOR FACILITIES

Our office and packing ground are located one block south of the Wabash depot and six blocks from the main business center of the city. Our packing plant covers an area of five acres. Illustrations on other pages of this catalog will give you an idea of the various buildings and grounds. These buildings are the most modern of their kind in the United States; electric lighted, supplied with city water and railroad tracks which permit the loading of cars in the most severe weather with no danger whatever to the trees and plants. Our large fields of growing stock join the city on the north and east and are easily accessible from our packing plant. On account of our admirable location near our growing stock, it can be handled with a minimum of exposure in getting it under cover in our commodious packing houses. We spare no expense in digging and handling our product in the most approved manner in order to get it to our customers in the best possible condition.

We grow a large assortment of hardy ornamental stock of all kinds in addition to our large line of fruit trees. Our assortment of fruit tree stocks is very complete in both American grown and imported varieties. We also carry a full line of nurserymen's supplies.

BRANCH PLANTS

In addition to our large plant at Shenandoah, Iowa, we maintain several branch plants at points where certain varieties of stock thrive better than here.

VISITORS AND CORRESPONDENCE

Visitors are always welcome as we are pleased to meet our customers and show them over our plant. We are always pleased to answer inquiries and submit prices by letter.

INSPECTION AND FUMIGATION

Our growing Nursery Stock is inspected annually by our State Entomologist, and we fumigate all shipments where customers desire that we should, or state laws require fumigation.

GENERAL INSTRUCTIONS FOR TRANSPLANTING AND MANAGING FRUIT TREES

1. PREPARING THE GROUND—Before planting fruit trees the soil (except new ground), should be made mellow by repeated plowing, and where the soil is densely packed, a subsoil plow should be used and the ground stirred up from twelve to fifteen inches deep. If this is neglected the roots are soon surrounded by an almost impenetrable wall and cannot be expected to live many years. Whenever this system has been practiced, healthy and vigorous trees and fine fruit have been the result.



Offices of the Mount Arbor Nurseries

2. RECEIVING AND CARING FOR TREES—Trees are frequently ruined through the lack of care or bad management after they fall into the hands of the purchaser. When trees are received the roots should be covered with a blanket, sack or straw until they reach their destination. The bundle should then be opened and the trees separated from the moss in which they are packed. If the roots have become dry from long exposure, straw should be spread upon the ground, the trees laid upon it, then covered entirely (roots and tops) with straw and the whole well watered. If holes are not yet dug or the ground too wet to plant when the trees are received, dig a trench and lay the trees in a slanting position, so that you can cover up the roots and two-thirds of the body or stalk. In this position let them remain until the holes are dug or the ground is in a suitable condition to receive them.

3. DIGGING THE HOLES—If the soil for an orchard has been properly prepared by subsoiling and deep plowing, then the opening of the holes becomes a very simple matter, and really this is by far the easiest, cheapest and best plan; for if the soil is thoroughly pulverized to a depth of from twelve to fourteen inches, all that is necessary is to measure off the distance at which the trees shall stand from one to another and the order of planting. Where only a few trees are to be planted and the soil has not been subsoiled, or where the trees are to be planted in sod, then the holes ought to be at least four feet wide and eighteen to twenty inches deep, the subsoil thrown back and the hole filled up to the proper depth with fine top soil to receive the trees.

4. PRUNE BEFORE PLANTING—Both root and top should be pruned at time of planting and before the tree is set in the ground. First cut off the ends of the broken and bruised roots with a sharp knife, in a slanting direction on the under side. This will cause the wound to heal over readily, by throwing out plenty of fibrous root at the end. Then cut back each branch or side limb to a bud not more than four to six inches from the body. Then cut back the leader or central limb so as to leave it about four or five inches above the highest side limb. When there are no side limbs the tree should be headed back to a height proper to form a top. None of the lower limbs should be cut off entirely, as it is best to form the heads as low as possible, so that the limbs and leaves will protect the trunk from the direct rays of the sun.



End View of Modern Nursery Storage Building, Mount Arbor Nurseries

5. DEPTH TO PLANT—Immense numbers of trees are ruined by being planted too deep. Most kinds of fruit trees, except dwarf pears and plums on peach roots, should be planted not over two or three inches deeper than they grow in the nursery row. Dwarf pears and plums on peach roots should be set so that the joint where the body and roots are united will be about four inches below the top of the ground. By this means roots will be thrown out from the body that is covered and larger and longer lived trees secured.

6. PLANTING—When ready to plant, take from the trench a few trees at a time; place the tree in position and arrange it to the proper depth by filling in or raking back the soil to or from where the tree will stand; then fill in the fine mellow soil between and around the roots with the hand, arranging the roots in their natural position and packing the soil carefully around them. When the roots are barely covered, sprinkle on water to moisten the soil and settle it among the roots; then fill to the top, press the earth very firm around the tree with the foot as you fill in. Throw a bucket of water around each tree to settle the ground, and scatter a little soil on to prevent baking.

7. MULCHING—Mulching prevents the moisture from escaping and maintains equitable temperature about the roots. The material used may be long manure, litter, straw, grass or hay, which should be spread on the surface around the tree for the space of four or five feet and three to six inches deep. Bearing trees may be benefitted by mulching heavily in winter, which will tend to prevent an early development of the fruit buds and assist them to escape the effect of late frosts.

8. AFTER CULTURE—The trees should be kept free from grass and weeds, and no crops should be grown in the orchard while the trees are young, except such as can be cultivated with the plow or hoe. Cultivate well in the spring and summer.

9. AFTER PRUNING—The great majority of people do not take proper care of their trees after planting. This is a great mistake. If a tree or vine does not receive the right kind of care and enough of it when young, it will never attain a healthy old age. Very much has been said about pruning by various authors. Judging these and our own experience and observation, we would say: The best time to prune fruit trees, and about all kinds of trees and shrubs, is during May and June, May preferred; but be governed by the health and vigor of the tree. We do not advise severe pruning, as too much would injure the tree. Keep all superfluous forks and limbs cut off and the heads in proper shape to admit air and sunshine as long as the tree lives. Currants and Gooseberries should be trimmed late in the fall or early in the spring, before commencing to grow; Grape vines late in November or any time during the winter up to March 1st; after this trimming is apt to excite bleeding or flowing of sap from the wounds. If desirous of getting rubbish removed from the orchard during the winter, cut limbs off eight to ten inches from the body and cut balance off during May or June following.

10. STANDARD APPLE TREES—May be planted twenty-five to thirty-three feet apart. We advise planting the rows thirty-three by sixteen and one-half feet apart; it is better to plant the close way north and south. When the trees attain age and begin to crowd, cut out every other tree. Those left will be in better condition and the others will have borne six or eight crops of fruit. Low heads are preferred, so as to protect the trunk from the direct rays of the sun. Cultivate as directed and do not neglect to mulch them, especially young trees.

11. CRAB APPLES—Should be planted twenty-five feet apart. They are very hardy and bear young and abundantly. The fruit is highly valuable for preserves and jelly and makes the finest cider known. Plant and cultivate same as an apple.



General View of Storage Buildings, Mount Arbor Nurseries. Main Building, 102x300 feet; Second Building, 62x110 feet, two floors.

12. STANDARD PEARS—Should be planted fifteen to twenty feet apart. They are grown on stocks imported from France and will grow on almost any soil, provided the subsoil is not too wet; whenever this is the case, the ground should be thoroughly underdrained. The best results are obtained from pears on a clay slope where the soil is poor.

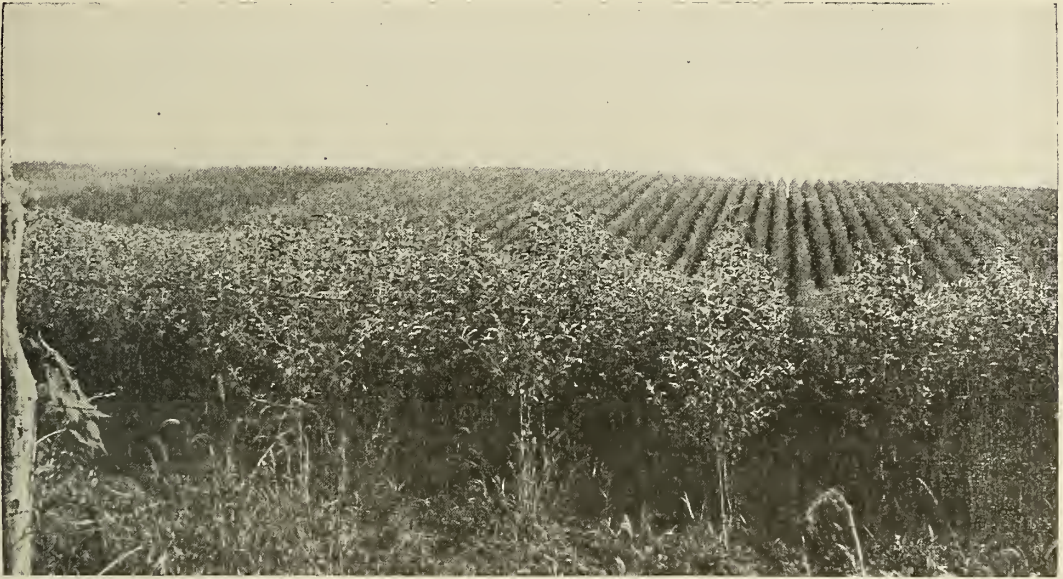
13. STANDARD CHERRIES—Should be planted fifteen to twenty feet apart. The soil best adapted to the Cherry is a light loam on a gravelly or sandy subsoil, though it will do well in almost any situation not too wet. To insure a good growth, Cherries should be well cut back for several successive seasons. Plant as directed and mulch well in the spring.

14. PLUMS—Should be planted ten to fifteen feet apart, in clusters, as so planting assures more complete fertilization of the blossoms, thereby giving the fullest returns of the most delicious fruit. Plums should have rich soil, which should be kept well cultivated.

15. PEACHES—Should be planted twelve by twelve feet apart. To secure healthy, vigorous and fruitful trees and fine fruit, the following points must be well attended to: First—Keep the ground clean and mellow. Second—Keep the heads low—the trunks should not exceed three feet in height. Third—Give them an occasional dressing with wood ashes. Fourth—Prune every spring shortening the shoots of the previous year's growth; this keeps the head round, full and well furnished with bearing wood. Cut weak shoots back about one-half, and strong ones one-third; but see that there is left a sufficient supply of fruit buds. Sickly and superfluous shoots should be cut out clean. The fruit is borne on wood of last year's growth and hence the necessity of keeping up a good supply of vigorous annual shoots all over the tree. Salt is an excellent fertilizer for peach trees; soap suds is also good. Young trees should be well mulched every spring, or kept well cultivated until about the middle of July each year. Would advise planting a good wind break on south side of orchard.

16. APRICOTS AND NECTARINES—Should be planted fifteen feet apart, and need the same management, culture and training as the peach.

17. CURRANTS AND GOOSEBERRIES—Should be planted in the garden four feet apart; sawdust and tan barks should be used as a mulch. The currant flourishes in almost any kind of soil, but to have the fruit in perfection, plant in rich, deep soil, and give good annual pruning and cultivation. When plants are grown as stools or bushes, the older and feebler suckers should be cut out and the stem and root kept free from suckers.



A 40-acre Block of Two-Year Cut-Back Apple

18. RASPBERRIES—Should be planted four feet apart each way or rows five feet apart and three feet apart in row and in a deep soil—one that will retain moisture well in drouth. In training allow only a few canes to grow from each plant, cutting away all suckers to throw the strength into the stalk for bearing; all old canes should be removed immediately after the fruit is all picked.

19. BLACKBERRIES—Require the same kind of soil and treatment as Raspberries, except that they should be planted in rows eight feet wide and four feet apart in the row. A neat and improved method of pruning will make the plants self-sustaining bushes, viz.; as soon as the plants are about four feet high, clip off the points of the growing cane and repeat the operation several times, until they assume the form of a bush. If not pruned in this manner they require to be tied to a stake or wire trellis. Mulching is of great advantage to both Raspberries and Blackberries.

20. GRAPES—If planted for fastening to a trellis or arbor, should be eight feet apart; if tied to stakes, six feet apart. The holes should be dug not less than four feet wide and two feet deep. Burying bones under the roots make the vines more prolific and the fruit of better quality. The bones should be put in the bottom of the hole and covered with fine soil, then pour on a little water to settle the dirt amongst the bones; then fill up with mellow soil to within five or six

inches of the top; cut off the bruised and broken roots; straighten the roots to their natural position and cover them with fine mellow soil about two inches, packing it carefully with the hand; then sprinkle on sufficient water to moisten the roots, fill up the hole and press the dirt very firm as you fill in. A stake should be placed with each vine at the time of setting, six to seven feet high. The first year train one shoot only up to the stake; pinch off all the others and also all the lateral or side shoots that appear during the first season; cut the vine down to within three or four buds of the ground. The following season train up two shoots in the same manner. It is advisable to remove most varieties from trellis and cover with dirt during the winter.

21. STRAWBERRIES—The ground should be prepared the same as for the other crops; if not already rich, make it so by manuring. Mark out the rows the desired width and set plants twelve to seventeen inches in rows; if set twelve inches in rows four feet apart, an acre will require 10,890 plants—same as if sixteen inches in rows three feet apart. Keep in rows and cultivate. A new bed should be planted every two or three years. In the early winter, when the ground is frozen, cover the whole with long straw, which should be partially removed from the row in the spring, but enough allowed to remain on the ground as mulch to keep the berries clean the following summer. When the plants are moved in the fall, they should be left until September. If taken up too early the plants are not as likely to live, as the roots are soft and spongy and will not bear exposure so well as after they have become matured and ripened.

22. WINTERING TREES WHEN PROCURED IN THE FALL—Procuring trees in the autumn for early spring planting is recommended, when the purchaser is not prepared to plant in the fall or prefers spring setting, or where the winters are too severe to set out young trees and plants in the fall. The greatest advantages derived in doing so are that when the roots have been cut or pruned it will be found upon taking them up in the spring, that a callous has been formed, ready for the producing of new rootlets, and the trees being planted without much exposure as soon as the frost is out of the ground, will become thoroughly established the first season, and should make twice the growth of late planted trees, and the labor of planting is done before the rush of spring work sets in. To insure success select a dry spot of ground where water will not stand during winter and no grass or litter that will invite mice. Dig a trench from three to four feet wide, according to the amount of trees to be heeled in, and deep enough to admit one layer of roots and sloping enough to let the trees lie at angle of about 30 degrees, throwing the earth on the back part of the trenches so as to make a more perfect slope on which to lay down the trees. Put in one layer of trees, placing the roots as close together as can conveniently be done; cover them with well pulverized, moist soil, well upon the bodies, and see that it is carefully worked in about the roots as if they were being planted; then add another layer of trees, overlapping the first, and continue as at first until all are heeled in, throw in the ground well up around the branches with about six inches of dirt on the tops, covering the trees entirely up with the earth. The roots should be pruned before laying them down in the fall.

Peach trees and Apricot trees should be mounded up every winter and allowed to remain a little later in the spring to insure full crops and protect them from late frosts.

A TABLE SHOWING THE NUMBER OF TREES OR PLANTS TO THE ACRE

Distance	No. of trees	Distance	No. of trees
1 foot apart each way	43,560	13 feet apart each way	257
2 feet apart each way	10,890	14 feet apart each way	222
3 feet apart each way	4,840	15 feet apart each way	193
4 feet apart each way	2,702	16 feet apart each way	170
5 feet apart each way	1,742	17 feet apart each way	150
6 feet apart each way	1,210	18 feet apart each way	134
7 feet apart each way	888	19 feet apart each way	120
8 feet apart each way	680	20 feet apart each way	108
9 feet apart each way	537	25 feet apart each way	69
10 feet apart each way	434	30 feet apart each way	48
11 feet apart each way	360	35 feet apart each way	35
12 feet apart each way	302	40 feet apart each way	28

RULE—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and the product will be the number of square feet for each plant or hill, which, divided into the number of feet in an acre (43,560), will give the number of plants or trees to the acre.

SUITABLE DISTANCES FOR PLANTING

Apples, Standard	30 to 40 feet	Grapes	8 to 10 feet
Apples, Dwarf	8 to 10 feet	Currants	3 to 4 feet
Pears, Standard	18 to 20 feet	Gooseberries	3 to 4 feet
Pears, Dwarf	10 feet	Raspberries, Red	3 to 4 feet
Peaches	16 to 18 feet	Raspberries, Black	4 to 5 feet
Nectarines and Apricots	16 to 18 feet	Blackberries	5 to 7 feet
Cherries, Sweet	18 to 20 feet	Strawberries, rows	1 by 3½ feet
Cherries, Sour	15 to 18 feet	Strawberries, in beds	1½ by 1½ feet
Plums	16 to 20 feet	Asparagus, in beds	1 by 1½ feet
Quinces	10 to 12 feet	Asparagus, in field	1 by 3 feet

FRUIT DEPARTMENT

APPLES

The apple is the first in importance of all fruits. It will thrive on nearly any well drained soil. Its period of ripening, unlike other fruits, extends nearly through the whole year. By making careful selection, a constant succession can be obtained. For family use there is no fruit that is more indispensable. No fruit is so healthful and many physicians say that if a person would eat an apple a day they could dispense with doctor bills. Besides this, and just as important, is the fact that the average price on the market is steadily increasing and the immense demand for home consumption, foreign shipping, canning and evaporating assures high prices. The apple if given the same care and attention as other farm crops, will yield greater returns per acre. The following list we consider to be the best and the varieties starred we recommend as the best for general planting.

Summer Apples

Benoni—Medium in size, roundish, remotely conical, ovate; flesh white, very tender, with an excellent sweet flavor. Ripens from the middle to the end of summer. A moderate and regular bearer. Growth vigorous, somewhat irregular, ascending; tree round-headed.

summer. Tender for West; succeeds well Southwest.

Jefferis—Medium or rather large, round, oblate; yellow, red and deep red, striped; stalk very short, slender; cavity and basin deep; flesh yellowish white, remarkably tender and juicy, flavor very pleasant. Ripens first of August.

Liveland (Lowland Raspberry)—Color orange-yellow, striped, splashed and shaded with red, showing gray dots through the color; flesh light yellow, often stained with red, fine, tender, juicy; core medium open; flavor sub-acid, good; season, August. There is no apple East or West of better quality than Liveland. The tree is perfect and a good bearer; the fruit is handsomely colored.

***Red Astrachan**—Origin, Russia. Season, July. First imported into England with the White Astrachan from Sweden in 1816. Tree upright, spreading, vigorous growth; an early and abundant bearer. Fruit above medium, greenish-yellow, almost covered with mottled and striped crimson; flesh white, crisp, juicy, brisk acid; good.

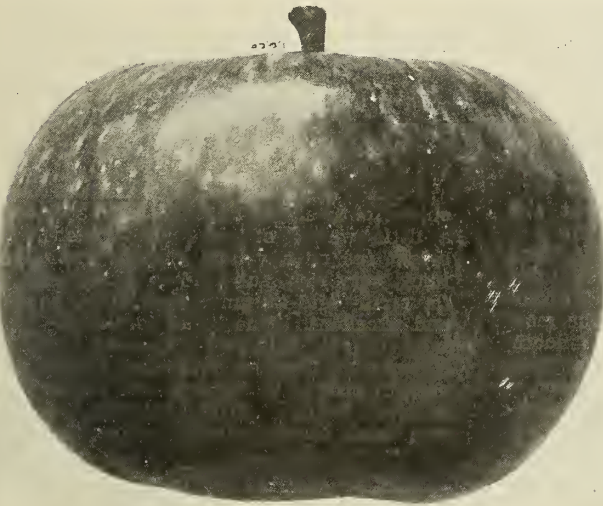
***Red June**—Size medium, oblong, very red; flesh white, tender, juicy, sub-acid, with a sprightly agreeable flavor; quite early and continues to ripen for four weeks, and will keep long after ripe for a summer apple; profitable for market. The tree is a fine, erect grower, very hardy, bears young and abundantly. A valuable early apple.

Sops of Wine—Medium size, round-ovate, dark red; flesh white, often stained red, moderately juicy, sub-acid, of good flavor. Valuable for its free growth and fair fruit. Late summer.

***Sweet June**—Rather small, roundish, regular; skin smooth, light yellow; flesh yellowish, very sweet, rich; tree upright, vigorous, productive. A valuable summer sweet apple.

Sweet Bough—Large, roundish, remotely conical-ovate. Flesh, white, very tender, with an excellent sweet flavor. Ripens from the middle to the end of summer. A moderate and regular bearer. Somewhat irregular, ascending. Tree round-headed.

Tetofsky—Origin, Russia. Season, July to August. One of the earliest apples to ripen in

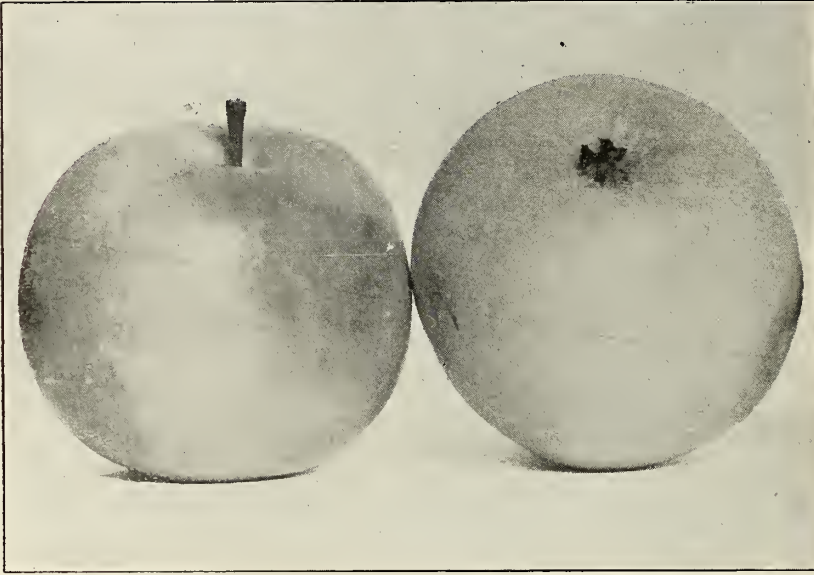


Duchess of Oldenburg

***Duchess (Duchess of Oldenburg)**—Origin, Russia. Season, July and August. Tree upright, vigorous and extremely hardy. An early and annual bearer of uniformly large crops. Fruit large, greenish-yellow with red stripes. Flesh light yellow, medium fine grained, firm; flavor a pleasant acid; a great cooking favorite and prime market sort. A good shipper for an early apple and commands good prices. Should be planted in every orchard. The most profitable early apple for commercial purposes.

***Early Harvest**—Size medium, roundish, usually more or less oblate, smooth, bright straw color when ripe; flesh nearly white, flavor rather acid, fine. Season July. Productive. Needs rich cultivation to be fine. Good throughout the Northern States and Southwest.

Golden Sweet—Medium or rather large, roundish, slightly flattened; greenish, becoming pale yellow; flesh very sweet, good, of moderate quality. The fruit is always fair, the tree a free grower, and very productive. Late



Yellow Transparent

the Northern states, very popular on that account. Fruit small to medium; light yellow, striped and splashed with red; flesh white, tender, juicy; flavor sprightly sub-acid, aromatic, extra good quality. Tree stout and upright in growth, but it is apt to blight.

***Yellow Transparent** (White Transparent, Thaler, etc.)—Origin, Russia. Season, July. Imported from St. Petersburg by United States Department of Agriculture. One of the most valuable early apples. Fruit medium, smooth, transparent skin; clear white, becoming pale yellow when fully ripe; flesh white, tender, fine grained, of splendid quality. Tree is moderately vigorous and a good annual bearer.

Autumn Apples

Anisim—Origin, Russia. Season, October to December. Tree spreading and a prodigious bearer; usually free from blight and about equal with Wealthy in hardiness. Fruit medium to small, roundish; color greenish, nearly covered with dark red, over which is a bluish bloom; flesh white, juicy, fine grained, pleasant sub-acid. Beautiful when well ripened.

***Autumn Strawberry**—Medium size, round, oval; flesh white, striped and splashed with red; tender, juicy, and pleasant; bears young and abundantly. One of the best early autumn apples.

Chenango Strawberry—Rather large, oblong-conic, angular; striped and splashed with light crimson on whitish-yellow ground; cavity, narrow and deep; basin narrow; flesh white, very tender, with a pleasant, mild, sub-acid flavor. September and October.

Fall Orange—Large, roundish-ovate, or oval; light greenish yellow, becoming pale yellow, rarely a brown cheek; sub-acid, tender, good, best when fresh from tree. Tree very hardy, bears while

very young, fruit always fair. Season, November.

***Fall Pippin**—Very large, roundish, oblong, yellow; flesh tender and delicious. Tree a free grower and a fine bearer; one of the most valuable varieties for table or market. Grown in Western New York as Holland Pippin. October to December.

***Fameuse** (Snow Apple) — Origin, Canada. Season, October and November. An old and well-known variety. Tree a moderate grower, productive. Fruit medium in size;

color pale greenish-yellow, mixed with stripes of red, with splashes of same on shady side; flesh white, tender and juicy, slightly perfumed; flavor sub-acid, extra good.

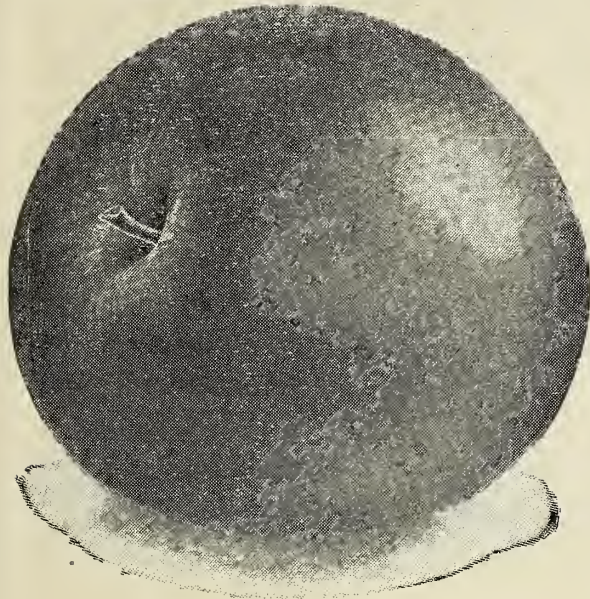
***Gravenstein**—Rather large, roundish, slightly oblate, obtusely and obscurely ribbed, surface a little wavy; striped and splashed with bright red on a yellow ground; flesh tender, juicy, very rich, sub-acid or rather acid, high flavored. Mid-autumn, productive, handsome and excellent. Fine in all localities.

Haas—Origin, Missouri. Season, October to November. Tree an exceptionally strong and upright grower in nursery and orchard; productive, hardy. Fruit, medium, roundish; skin thick, tough; surface yellow, nearly cov-



Gano (See page 13)

ered with crimson stripes and splashes; a handsome fruit when well colored; flesh, snowy white, juicy, with a peculiar quince-like texture; quality poor. Useful for culinary purposes.



Jonathan (See page 13)

Iowa Beauty—Originated by C. G. Patten, Charles City, Iowa. Tree, vigorous and productive. Fruit large, roundish truncated, irregular, angular; surface golden yellow, striped, splashed and mixed dark red; a handsome fruit; dots white, minute, obscure. Flesh rich yellow, firm, juicy, acid, good. Fall. A seedling of Golden Russett. Follows the Duchess in season.

Kaump—Origin, Wisconsin. Season, September to December. Of about same hardness as Longfield; bears well, like Longfield, and a better keeper. Fruit, small to medium; color green with blush of dark red; flesh nearly white; flavor a fine sub-acid. Very useful for the home orchard.

Longfield—Origin, Russia. Tree hardy, vigorous, spreading, pendulous growth; an early annual bearer. Fruit medium, roundish, conical, unequaled; surface smooth, polished, clear waxen yellow, with lively red blush; dots distinct, few, large, yellowish. Flesh very white, very tender and juicy, pleasant, brisk sub-acid; good. October and November.

Maiden Blush—Of uniformly good size, smooth, round, beautifully flushed with red on creamy yellow ground; flesh tender, of pleasant but not high flavor. A good market sort because of its attractiveness and the tree's heavy crops. September and October.

McMahan (McMahan's White)—Origin, Wisconsin. Season, October to December. Fruit large to very large; color, greenish pale yellow to nearly white, often with suffused pale blush on sunny side; flesh, pale yellow with good acid flavor; skin very tender and does not stand tight packing; crisp and a good table apple in season; splendid cooker, as it has the proper firmness. Tree a good grower, and moderately productive.

Okabena—Origin, Minnesota. Season, August to October. Vigorous, absolutely hardy, and an ideal orchard tree in every respect. Bears very young, and a good crop may be depended upon. Fruit medium to large; yellow, striped and splashed with carmine, which is heavy on sun-side; flesh yellowish-white, fine grained, crisp and juicy; flavor sprightly sub-acid; quality excellent. Ripens after Duchess and valuable in market on that account. A seedling of the Duchess and an excellent dessert apple.

Peerless—Origin, Minnesota. Season, September to October. Fruit medium to large; yellowish-green with stripes and splashes of carmine; flesh yellowish-white; fine grained; flavor agreeable sub-acid, but not rich. Tree a vigorous, upright grower.

Price's Sweet—Of very strong, upright growth in nursery and orchard. Popular in parts of the West. Fruit medium, regular, oblong, conical, often unequal; surface yellowish-green, mostly thinly covered with mixed and marbled dull red, obscurely splashed and striped; dots, large distinct, numerous, russet, rough; flesh yellowish-white, moderately juicy, very sweet, good. October to November.



Northwestern Greening (See page 14)

***Rambo**—Size medium, oblate, smooth; streaked and marbled with dull yellowish red on pale yellowish ground; dots large, whitish; flesh tender, rich, mild sub-acid, fine flavored, often excellent. Late autumn and early winter.

***Ramsdell Sweet**—Rather large, oblong, obscurely conical, regular; dark rich red, with a blue bloom. Flesh yellowish, tender, sweet, rich, good second quality. Tree vigorous, upright, productive. Late autumn and early winter.

Utter (Utter's Red)—Origin, Wisconsin; a vigorous, upright grower. Season, September to October. Fruit above medium to large; surface yellow, splashed, mottled, striped and much dotted with bright red. Flesh white, fine grained, tender, juicy, mild pleasant sub-acid.

Winter Apples

Aiken—Fruit medium to large; color deep red, in color and quality resembles Jonathan, possessing more vigor. Will keep longer than Jonathan. Its fine appearance and superior quality, together with the great vigor of the tree, makes it worthy of general trial.

***Arkansas Black**—A remarkably handsome crimson-black apple; large, perfectly smooth, roundish flat, lightly dotted with white, the flesh is yellow, juicy and delicious, keeping late. December to April.

Allen's Choice—Medium, roundish-oblate, striped, coarse, aromatic, good. Tree a strong grower. December to February.



Stayman's Winesap (See page 15)

Bailey Sweet—Origin, New York. Season, October to November. An old choice variety. Has been fruited successfully as far north as Southern Minnesota and South Dakota. Fruit large, conical, irregular; greenish yellow with dull red stripes and russet dots; flesh yellow, moderately juicy, firm, sweet and very good.

***Baldwin**—Origin, Massachusetts. Season, December to March. The great commercial late winter keeper of the Eastern states. Tree a vigorous, open grower, upright in tendency and very productive where hardy. Fruit large, rounded, deep red; flesh rich, crisp and juicy.

Banana—Fine, vigorous grower, large healthy foliage; early bearer. Fruit medium to large, smooth and handsome, golden yellow usually shaded with red blush; flesh fine grained, rich, sub-acid, aromatic; highest quality. One of the best dessert apples. A valuable market variety in some sections. Originated in Indiana.

Baxter—Fruit large to very large, roundish, somewhat flattened at the base; skin is pale yellow, largely mottled and striped with bright red; flesh stained with red; firm, tender, moderately juicy and aromatic. Tree is productive, and a vigorous grower. November to January.

***Ben Davis**—Origin, Kentucky. Season, January to April. Vies with Baldwin as a profitable commercial variety in many sections; quality not so good, but a better bearer and keeper. Tree very vigorous and hardy in the Central states. Fruit large, handsome, brightly striped with red; flesh medium quality.

Black Annette—Fruit medium, roundish oblate, regular; surface green, almost



Wealthy (See page 15)

wholly covered with dark brownish red, with darker splashes, well colored specimens, black red with splashes mostly lost in the depth of coloring; dots very conspicuous, large, numerous, whitish and russet; flesh white, mild, pleasant, sub-acid, very good. Season all winter and spring.

***Gano**—Originated in Missouri. Similar but superior to Ben Davis. It has all the good qualities in a higher degree, more brilliant coloring, runs more even in size, and keeps fully as late. The tree is vigorous and hardy; is a rapid grower; bears while young. Color bright red without stripes or blotches, and large and even in size. Season, February to March.

***Grimes' Golden**—Origin, Virginia. Season, November to January. Tree vigorous, upright, spreading, a good early annual bearer. Fruit above medium, regular; surface rich golden yellow, sometimes with net veining of russet; flesh yellow, firm, compact, crisp, aromatic, rich, spicy, sub-acid; quality the best. A valuable early winter apple and particularly desirable for its late blooming.

Hibernal—Origin, Russia. Season, November and December. This variety represents what is probably the hardest type of the Russian race. Tree sturdy, vigorous, very spreading and productive. Fruit large to very large, irregular; greenish yellow with dull bronze red on sunny side; flesh acid, juicy, very good for cooking. Succeeds in the most exposed locations and is popular in the Northwest on this account.

Hubbardston Nonsuch—Large, handsome, yellow, overlaid with red; tender fleshed, with distinct, delightful flavor. Strong grower and heavy bearer. A native of Hubbardston, Massachusetts. Season, November to January.

Huntsman—Originated in Johnston County, Missouri; very large, golden yellow, with bright red cheek; nearly sweet, fine flavor, very aromatic; one of the best and highest selling market apples; tree very healthy and moderately productive. Vigorous. November to January.

Ingram—A seedling of Janet. Tree more upright and a better grower. Fruit medium size, roundish, inclined to conical; smooth, yellow ground, striped, bright red, flesh greenish-yellow, delicate, tender, juicy, sub-acid. A late keeper.

Iowa Blush—Origin, Iowa. Tree very productive, a strong grower in nursery and orchard. Fruit small, roundish conical; surface smooth, yellow with bright mottled red blush. Flesh white, juicy, mild, sub-acid, good. November to January.

Isham Sweet—Fruit large, oblong, conical, greenish yellow; striped with dull red; beau-

tiful, showy, good; tree hardy, spreading. November to January.

***Janet** (Rawl's Neverfail)—Medium in size, roundish, approaching oblong or obtuse-conical, often oblique; color pale red, distinct stripes on light yellow ground; flesh nearly white, fine, mild, sub-acid, fine texture, crisp, juicy. Growth slow; a profuse bearer. Keeps through spring. The blossoms open ten days later than usual kinds, thus sometimes escaping spring frosts, and hence the name Neverfail.

***Jonathan**—Origin, New York. Season, November to January. A seedling of Spitzenburg, which it resembles in fruit, and is a much better tree. Hardy in latitude of Central Iowa, where it is a vigorous and productive variety. A delicious and strictly dessert apple that always commands highest market prices.



Wolf River (See page 16)

Fruit good size, roundish; surface is very smooth, clear light yellow, almost covered with rich dark red on sunny side; flesh white, tender, juicy, spicy, aromatic.

King of Tompkins County—Very large, round, oblate, yellow striped and clouded; quality excellent. An abundant annual bearer. November to March.

Lansingburg—Tree upright, spreading and productive; fruit medium, roundish, oblate, yellow, largely overspread with grayish red, flesh firm, mild, sub-acid; good; valuable mainly for its long keeping qualities; vigorous; keeps late in spring.

Little Red Romanite (Carthouse)—Medium or rather small, roundish-oblong, nearly regular, apex flattened; striped and shaded deep red on greenish yellow ground; flesh tough, crisp, fresh, agreeable, mild, sub-acid, nearly sweet, of moderate quality. Keeps fresh till late in the spring.

Malinda—Origin, Vermont. Season, February to March. An irregular but steady grower of about same hardiness as Wealthy. Wherever grown in the North it is giving great satisfaction as a long keeper. Fruit medium; flavor sub-acid and good. Its size, beauty and smoothness are strong points in its favor.

***Mammoth Black Twig**—Excels Winesap in nearly every important point; a better grower, hardier, and the fruit much larger; color even a darker red; flesh firmer; flavor milder, but fully equal. A long keeper.

***McIntosh Red**—Origin, Ontario. Season, December and January. A choice variety of the Fameuse type. Tree vigorous with spreading head; a good annual bearer. Fruit above medium to large, highly perfumed; smooth polished yellow, almost covered with brilliant solid crimson, a beautiful fruit; flesh snow white, crisp, very tender, sprightly aromatic, sub-acid; very good quality.

Milam—Rather small, roundish, greenish, shaded and striped with red; flesh rather firm with a pleasant sub-acid, moderate flavor. A good keeper. Hardy and productive. Tree a good grower.

Milwaukee—Seedling of the Duchess. Large, oblate, smooth and regular; yellowish, splashed and shaded with deep red; flavor pleasant with spicy aroma; tree strong and healthy grower and hardy; early and abundant grower. December to March.

***Missouri Pippin**—Large, oblong, bright red with numerous gray dots, very handsome and of fair quality, an early and very abundant bearer, and very profitable orchard fruit; vigorous. December to March.

***Northern Spy**—Large, roundish-conical, often flattened, slightly ribbed; handsomely striped with red; flavor rich, aromatic, mild sub-acid, fine. Keeps through winter and late into spring; a tardy bearer. To afford fine fruit, tree must be kept thrifty by good cultivation. A fruit of the highest quality, and profitable for market.

***Northwestern Greening**—Origin, Wisconsin. Season, December to March. Tree a splendid, vigorous grower, quite hardy. Fruit large to very large; green, becoming yellowish green when ripe; flesh yellow, fine grained and firm; flavor a good sub-acid; very smooth and attractive; should be given plenty of room in the orchard to secure large, even fruit. One of the best growers we have in the nursery and in the orchard is very prolific and regular when mature.

Paradise Winter Sweet—Fruit rather large; color dull green when picked; flesh white, fine grained, juicy, sweet, sprightly and very good. Productive and extremely satisfactory for either home or market. November to February. Tree upright, moderate, blights in some localities.

***Patten's Greening**—Origin, Iowa. Introduced by C. G. Patten. Season, October to December. A seedling of Duchess of Oldenburg. Fruit large to very large, when well grown; green with often a blush of red or brown; flesh yellowish white, rather coarse, but firm; core small; flavor a pleasant acid. Tree vigorous and spreading, and exceptionally hardy;

an early and regular bearer. The fruit is very smooth and attractive and keeps well in home orchard and for market and is highly recommended for general planting.

Perry Russett—Medium, oblate, regular, smooth; yellow shaded and striped bright red, dots numerous, large russety. Flesh yellow, fine grained, tender, juicy, mild sub-acid, good. A good bearer and a long keeper.

Peter—Originated in Minnesota by Peter M. Gideon, who also brought forth the Wealthy. Resembles Wealthy so closely that it is very difficult even for experts to distinguish it from that variety. Mr. Gideon, himself, could not distinguish the two varieties by the fruit, but claimed that Peter was the hardier tree. Is so nearly identical with Wealthy for all practical purposes that it will never be largely grown as a distinct variety.

Pewaukee—Origin, Wisconsin. Season, December to March. Tree spreading, round topped and vigorous. Doing well in Eastern Wisconsin. Fruit large, yellowish green, striped and shaded with dull red, overlaid with a bluish bloom. Flesh yellowish, rather coarse grained, firm, juicy; flavor sub-acid. Originated by crossing Duchess of Oldenburg with Northern Spy pollen.



Crab Apple—Florence

***Pound Sweet**—Very large, roundish, ribbed most toward the stalk; pale green; flesh white, sweet, tender, not juicy, of moderate quality. Ripens through autumn into winter. A valuable culinary sort.

Reagan's Red—Large, roundish ovate, striped and marbled with red on light greenish yellow ground; flesh yellowish white, of a rich, spicy, rather acid flavor. Early winter. Similar to Ben Davis and Gano. Origin, Arkansas.

Rhode Island Greening—Origin, Rhode Island. Season, December to March. Fruit large and handsome, smooth, dark green overspread with yellow. Flesh tender, rich, rather acid, but highly flavored and excellent. Has long been popular in the Eastern states as a dessert apple and also for cooking. Tree vigorous and spreading; a heavy and constant bearer.

***Roman Stem**—Origin, New Jersey. Season, November to March. A very productive variety grown with considerable success in the latitude of Iowa. Splendid in quality, but size and color against it for market. Fruit medium to small, often irregular; smooth, rich yellow, with faint bronze blush; flesh yellow with yellow veinings; tender, juicy, spicy, rich sub-acid, excellent as a dessert apple and for cooking. Tree is of moderate vigor. Irregular growth.

Rome Beauty—Large, roundish, very slightly conical; mostly covered with bright red on pale yellow ground; flesh tender, not fine-grained, juicy, of good quality. Ripens early in winter. The large size and beautiful appearance of this Ohio apple render it popular as an orchard variety.

Roxbury Russett—A vigorous and spreading grower. Fruit medium or large, roundish oblate, remotely conical; partly or wholly covered with rather rough russet on greenish-yellow ground, sometimes a dull brown cheek; flesh greenish-white, rather granular, slightly crisp, with a good sub-acid flavor. Keeps late in spring. Large specimens become conical, with short thick stalks. It succeeds well throughout the Northern States.

***Salome**—Flesh, whitish-yellow, half fine, tender, mild, slightly aromatic, very good. January to May; its hardness, long-keeping, good quality, uniform size, retention of its flavor quite late, makes it valuable for the West and Northwest.

Scott's Winter—Origin, Vermont. Season, December to February. Fruit small to medium; color deep red over yellow ground, russet in cavity; flesh yellowish white, coarse grained, juicy, small core; flavor, pleasant acid, good. Tree a spreading grower and productive with age.

Seek-No-Further (Westfield)—Medium or large, roundish, often slightly conical; obscurely striped with light dull red, more or less russeted, rarely covered wholly with russet; flesh tender, rich, spicy, of fine flavor; mid-winter. Tree productive; fruit always fair. Succeeds well throughout the Northern states.

Smokehouse—Fruit medium size, yellow, splashed with crimson, and sprinkled with large gray and brown dots. Flesh yellowish, firm, juicy, sub-acid; valued for cooking. December to February.

***Spitzenburg** (Esopus) — Rather large, round-ovate, slightly conical; surface a high, rich red, rather obscurely striped; flesh yellow, firm, crisp, spicy, rather acid, unequalled in its high rich flavor. Keeps through winter. Commands highest market prices, especially prized in the West.

***Stayman's Winesap**—It is now attracting attention everywhere as a profitable market variety. It has large size, bright red color, great productiveness and best quality to commend it. The tree is a vigorous grower and like its parent, is irregular and drooping in habit, and adapts itself readily to different soils and situations. Season, November to February.

Talman Sweet—Origin, Massachusetts. Season, December to March. One of the most popular of the old eastern varieties. Tree is vigorous, upright, spreading and very productive. Fruit above medium; whitish-yellow, often with faint blush on sunny side; flesh white, firm, moderately juicy, fine grained, rich and sweet; quality excellent for a sweet apple.

University—Origin, Iowa. Season, November and December. A seedling of the Duchess, originated by C. G. Patten. Tree is a vigorous and spreading grower. Fruit large, very regular; surface a clear yellow on sunny side; core medium, flesh white with yellow veining; flavor pleasant sub-acid, quality good.

Wagner—Medium, oblate, obscurely ribbed; shaded and indistinctly striped with pale red, and a full, deep red in the sun on warm yellow ground; often streaked with russet; flesh yellowish, fine grained, tender, compact, mild sub-acid, aromatic, excellent; ripens through winter; succeeds well in the West. An early bearer.

***Wealthy**—Originated about 1861 by the late Peter M. Gideon, Excelsior, Minn. This one variety is an enduring monument for its originator. Season, September to January. Almost too well-known to need description. Since its origination it has become extensively planted in all the apple growing states. Fruit large, regular, smooth, light yellow with crimson stripes and splashes; flesh white, often stained with red, tender, very juicy, sprightly sub-acid with delicious aroma. Splendid dessert and cooking apple. Market demand never supplied.

White Winter Pearmain—Rather large, conical, angular or ribbed; light yellowish green, with a brownish-red cheek; stem short; flesh whitish, fine grained, with a mild sub-acid, rich, fine flavor. Is one of the best and most productive winter apples in the West.



Crab Apple—Transcendent (See page 17)

Willow Twig—Large, roundish, slightly conical, obtuse, very regular; greenish yellow, striped and mottled faintly with dull red; flavor sub-acid, or rather acid; not rich. A long keeper.

Windsor Chief—Origin, Wisconsin. Tree very productive and an early bearer. One of the hardiest of the Wisconsin winter seedlings. Fruit hangs well to the tree in high winds. Fruit medium smooth, light greenish-yellow, mostly covered with mixed and marbled dull red, indistinctly splashed, rarely striped with crimson; dots many, large, gray, coalescent, some surrounded with russet; flesh, whitish-yellow, firm, fine grained, somewhat spicy, pleasant sub-acid, very good. December to spring. Subject to blight in some localities.

***Winesap**—Origin, New Jersey. A valuable, old, well-known variety. Season, December to May. One of the leading export apples. Fruit medium, roundish, skin moderately thick and very tough; dark yellow, almost entirely covered with dark red; flesh yellow, fine grained, firm, rich, crisp, sprightly sub-acid; quality excellent. Tree moderately vigorous with rather open, irregular head. Very productive and an early bearer.

Wisconsin Russett—Origin, Wisconsin. Medium size, oblate or roundish, color yellowish-white, somewhat blushed, flesh fine and juicy, sub-acid, quality good; a good Northern apple.

***Wolf River**—Origin, Wisconsin. Season, October to January. One of the largest apples grown. Color yellowish-green with stripes and splashes of carmine, very handsome and showy; flesh nearly white, firm and rather coarse grained; flavor sub-acid, fair to good. Tree vigorous and fairly productive.

***York Imperial** (Johnson's Fine Winter)—Origin, Pennsylvania. Medium, oblong, angular, oblique, smooth; yellow shaded red, indistinct red stripes; flesh yellow, firm, juicy, sub-acid, good. Winter. An excellent shipping apple, always brings high prices.

Yahnke—Origin, Minnesota. Season, February to May. One of the finest and hardiest late keepers yet brought out. A seedling introduced by Frank Yahnke, Winona, Minnesota. First named "Winter King," but later changed to "Yahnke." Fruit is large and exceedingly handsome; rich yellow, heavily striped and splashed with dark crimson; flesh white, firm, tender and juicy; flavor sub-acid and of prime quality. Skin tough and bears handling well. Tree vigorous and upright, and early, regular and heavy bearer.

***Yellow Bellflower**—Large, often quite large; surface pale yellow, often with a blush; very tender when ripe, fine grained, crisp, juicy, acid, becoming sub-acid, excellent, keeps all through winter. Growth of tree rather upright; succeeds best on rather light soils.

Yellow Newtown Pippin—One of the most celebrated of American apples on account of its long keeping and excellent qualities and the high price it commands abroad; but its success is confined to certain districts and soils. Medium, roundish, juicy, crisp, aromatic flavor. November to June.



A Block of Kieffer Pear Trees (See page 18)

CRAB APPLES

Within the past few years a good many people have given much attention to improving this class of fruit. Their efforts have been attended with marked success. Crab apples succeed equally well in all sections and are valuable for cider, preserving and jellies, and some of the improved sorts are excellent for eating. Every orchard should contain a few, as the trees are handsome, annual bearers, and usually fruit the second year.

Brier Sweet—Same as Van Wick. Origin, Wisconsin. Season, August and September. Tree hardy and long lived; a heavy annual bearer. As nearly "blight proof" as any member of the apple family. Fruit, medium, color yellow, overspread with red; flesh yellowish-white,

fine grained, sweet. One of the best for canning and sweet pickles.

***Early Strawberry**—Origin, Iowa. Season, July and August. Should not be confused with Early Strawberry Apple. Early Strawberry Crab is an old-time favorite, especially in the Northwest. Tree is hardy and a vigorous grower. Fruit medium, greenish yellow, ground overspread with carmine stripes and splashes; flesh nearly white; flavor mild, sweet, very good. One of the best crabs for eating.

***Florence**—Origin, Minnesota. Season, August. Originated with Peter M. Gideon, who also produced the Wealthy Apple. A hardy spreading tree; bears young and inclined to overbear. Fruit medium; color carmine when well

colored; flesh yellowish, medium, fine, acid; excellent for cooking. A fine jelly crab, and valuable for early market, as well as home use.

General Grant—Large, roundish oblate; yellow, with stripes of dark red, almost black on the sunny exposures; flesh white, moderately fine grained, mild, sub-acid flavor. September to October.

***Hyslop**—Origin, America. Season, September to October. Tree vigorous where hardy. Blights in some localities. Fruit medium; yellow grounded with heavy shadings of deep crimson and splashes of maroon with heavy blue bloom; flesh fine, firm, yellow, astringent; bears abundantly in clusters, which make tree exceedingly ornamental. Its high color always commands a fancy market price for it. One of the most desirable crabs for culinary purposes.

Martha—Origin, Minnesota. Season, August and September. Tree a vigorous grower and very free from blight. Fruit large, yellow with heavy blush of light red; flesh fine grained, firm; flavor sub-acid, very juicy and exceptionally fine for cooking. Not productive.

Minnesota (Hybrid)—Origin, Iowa. Season, October to January. A spreading and exceedingly hardy grower; bears liberally with age and is growing in favor. Fruit large, light yellow, often splashed or mottled with blush on sunny side when allowed to fully ripen; flesh cream-white, fine grained, juicy, flavor mild sub-acid and slightly aromatic. Delicious to eat out of hand and particularly desirable for culinary purposes.

***Red Siberian**—About an inch in diameter, grown in clusters; bears young and abundantly. August to September.

Shields—Quite large, light colored, somewhat striped; tree thrifty, vigorous grower, prolific and hardy.

Soulard—Origin, Illinois. Season, December to February. The only strictly native American member of the apple family that has been extensively propagated. It was discovered in a wild crab thicket near Galena, Illinois, some time in the 'sixties, and has been reported hardy in all the Northern states. Fruit medium, yellowish-green; flesh white, firm; flavor acid. Its value is in the fine quince-like flavor it imparts when cooked with apples and crabs for jelly and preserves.

Transcendant—Origin, Russia. Season, September. Fruit medium to large; color brownish yellow with blush of carmine; flesh firm and crisp, yellowish, fine grained, very juicy, acid. Tree is a vigorous grower. Hardy. Subject to blight and should not be planted near other orchard trees.

Virginia—Season, September. Fruit medium, round; color yellow and blush red, somewhat striped; flesh yellow, crisp; flavor acid, sometimes bitter. Tree vigorous, large, spreading, hardy, moderately productive. Decidedly different form Howe's Virginia, and should not be confounded with it. Desirable for top-grafting.

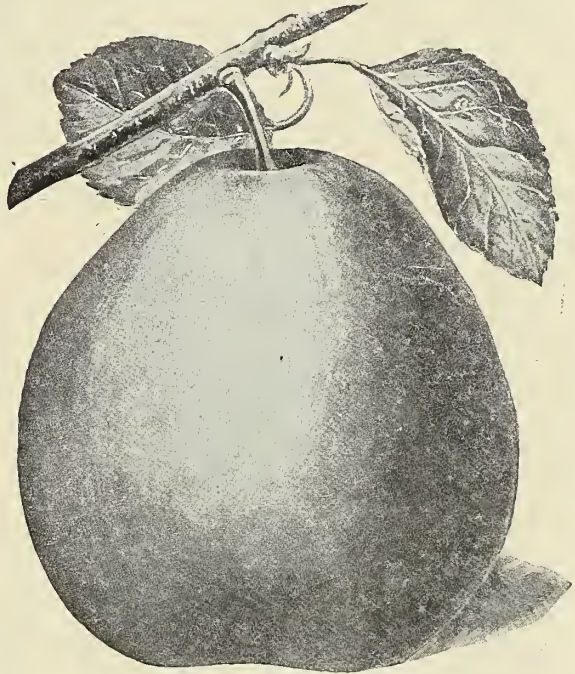
***Whitney (Hybrid) (Whitney No. 20)**—Origin, Illinois. Season, August. Fruit large to very

large for a hybrid; yellow, striped with red and mostly covered with red on sunny side; flesh yellow, very juicy and fine grained; flavor rich and almost sweet. Its crab percentage is shown in the health and vigor of the tree. The fruit in size and quality is fully equal to many apples.

Yellow Siberian—Medium, round, golden yellow. Vigorous grower. Ripens in September.

PEARS

The cultivation of this fruit is rapidly extending as its value is appreciated and the demand is increasing every year, making it one of the most profitable to plant. The range of varieties is such that, like apples, they can be had in



Beurre d'Anjou (See page 18)

good eating condition from August until early spring. The melting, juicy texture, the refined flavor and the delicate aroma of the pear give it rank above all other fruits, excepting the grape. One of the most important points about the management of pears is the gathering at the proper time. Summer pears should be gathered at least ten days before they are ripe, and autumn pears at least two weeks. Winter varieties may hang until the leaves begin to fall, then place in a cool, dry cellar.

When the pear trees are heavily laden the fruit should be thinned when about one-third grown, else it will be poor and the tree injured.

Summer Pears

***Bartlett**—Large size, with a beautiful blush next the sun, buttery, very juicy, and highly flavored; tree a strong grower, bears early and abundantly; very popular. August, September.

Clapp's Favorite—A large fine pear resembling the Bartlett, but without its musky flavor; pale lemon-yellow with brown dots, and fine texture, melting, buttery, juicy with a delicate flavor, tree hardy and productive. August and September.

Early Harvest—Large, golden-yellow with bright red cheek, quality not the best, but grown extensively for market on account of its size, beauty and hardiness; ripens ahead of Bartlett.

Le Conte—Tree very vigorous and productive, fruit large, skin smooth and pale yellow; quality fair; ripens about with Bartlett.

Tyson—Medium, bright yellow with reddish-brown cheek, buttery, melting and juicy; sweet and slightly perfumed; tree erect, vigorous, but slow to come into bearing; ripens late summer.

Wilder—Medium to small, greenish yellow with a brownish red cheek; melting, sweet and very pleasant; tree a vigorous grower and good bearer.

Autumn Pears

Comice—Large, roundish, greenish-yellow, shading to bright yellow when fully ripe; flesh fine grain, white, melting and sweet. A good shipping pear. October and November.

***Beurre d'Anjou**—A large, fine pear, buttery and melting with sprightly flavor; tree a fine grower and very productive; one of the best. October to January.



Kieffer

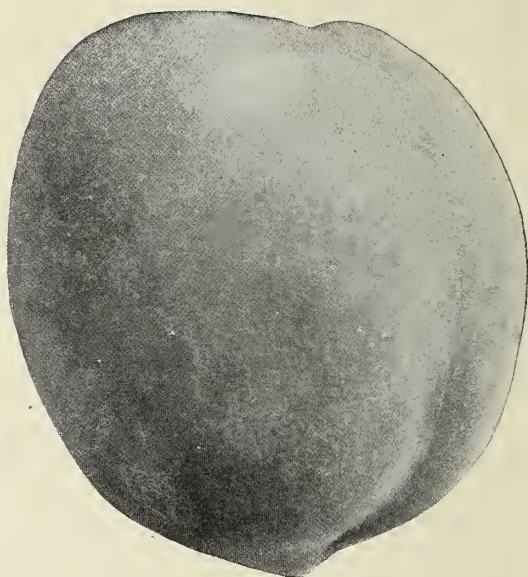
***Duchess d'Angouleme**—Very large, greenish-yellow, sometimes russeted; makes a beautiful tree and heavy bearer, buttery, melting and sweet. October and November.

Flemish Beauty—Large, juicy, melting and rich; strong grower and good bearer, very hardy. September and October.

Garber—Large, bright yellow with red, juicy and good; a splendid canning pear, tree vigorous

and hardy, not subject to blight; ripens just after Bartlett.

Howell—Large, light waxen yellow with a fine red cheek, rich, sweet and melting, highly perfumed, tree vigorous, hardy and bears abundantly; one of the very best. September and October.



Elberta Peach (See page 19)

***Kieffer**—This is the most popular pear grown; fruit of fine size, rich color and good quality; tree very vigorous and seldom blights; should be picked at maturity and ripened indoors. October and November.

Louise Bonne de Jersey—Medium to large, greenish yellow with bright red cheek; juicy, buttery and melting, very productive; tree an upright grower. September and October.

***Seckel**—Small, rich, yellowish-brown; one of the best and highest flavored pears known; very productive. September and October.

Sheldon—Large, yellow or greenish-russet with fine red cheek; flesh a little coarse, melting, juicy and crisp, highly perfumed, tree vigorous and productive. October.

Vermont Beauty—Of medium size, roundish, yellow, heavily shaded with carmine; flesh exceedingly fine, sweet and juicy. The tree makes a strong, healthy growth and bears good crops. October.

Worden-Seckel—A seedling of the Seckel; color golden-yellow with bright crimson cheek; flesh white, juicy, buttery, fine grained and melting; tree an upright, vigorous grower. Very hardy and an abundant bearer.

Winter Pears

***Lawrence**—Medium to large; lemon-yellow with small brown dots; flesh white, juicy and melting and of good quality; one of the best winter pears known.

Winter Nelis—Medium, yellowish-green and russet; fine grained, melting, rich and delicious; one of the best winter pears; tree rather a slender grower, but very productive. December.

PEACHES

To secure healthy, vigorous and fruitful trees, the ground must be well drained and kept clean and mellow. Peach trees are easily cultivated and their freedom from disease, the short time it takes to come into bearing and the immense demand for the fruit, makes them extremely profitable. Peaches are borne on wood of the previous season's growth and this makes it absolutely essential to prune the trees yearly, remove dead branches and let in light and air. Keep the trees in good shape and you will have splendid returns.

***Alexander (Cling)**—Medium size; greenish-white, nearly covered with rich red; flesh sweet and juicy; tree vigorous and productive; a good market peach.

Amsden (Free)—Medium, roundish; shaded and mottled red, melting, juicy and very good quality, adhering to the stone a little; tree vigorous, one of the earliest to ripen.

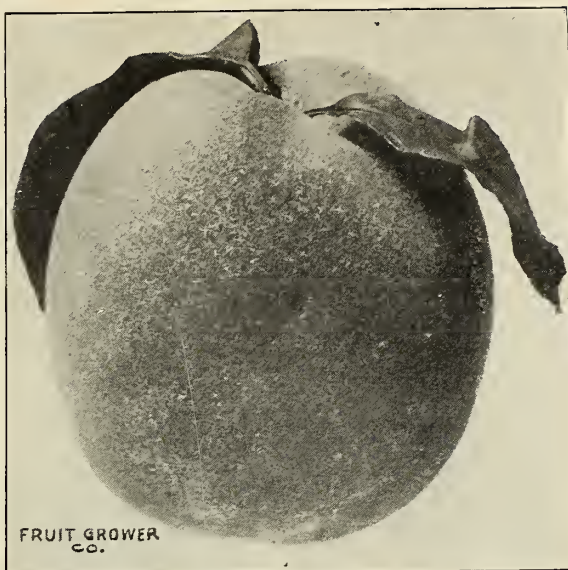
Bailey (Cling)—Small and hardy; ripens late, very productive and almost always sure of a crop.

Beer's Smock (Free)—Medium to large, round; creamy-white with dark red blush; flesh yellow, tender and rich; good quality; a good commercial peach.

***Bokara No. 3 (Free)**—Large, yellow with red cheeks; flesh yellow, firm and melting; an excellent keeper.

***Carman (Free)**—Large; resembles Elberta in shape; creamy white with deep blush; skin tough, making it a good market variety; flesh tender, juicy and fine flavor; a prolific bearer.

Chair's Choice (Free)—Large, roundish, taper-



Greensboro (See page 20)

ing to apex; pale yellow with some blush, flesh yellow, quite acid and red at pit; a good commercial peach. October.

***Champion (Free)**—Large, round, quite regular; yellowish white mottled with red on sunny side; flesh white with red at the pit; one of the best in quality.

Chinese Cling (Cling)—Large, roundish, somewhat elongated; pale yellow, flesh white; red at pit; tender and good.

***Crawford's Early (Free)**—Large, roundish, bright yellow with red cheek; flesh yellow, juicy and sweet; quality good. August and September.

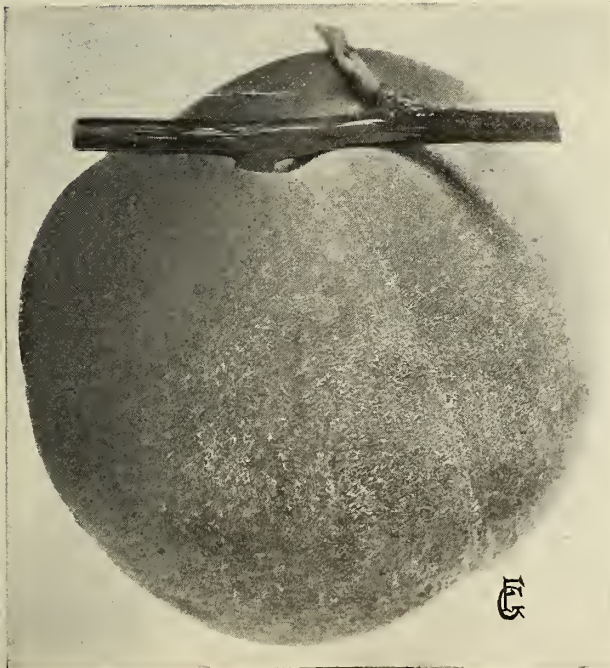
Crawford's Late (Free)—Large, roundish-oval, yellow with broad red cheeks, flesh yellow with red at the pit; melting, vinous and very good. Late September.

***Crosby (Free)**—Medium to large; orange-yellow splashed with red; flesh yellow, red at pit, juicy and rich; tree hardy and prolific; fruit should be thinned in order to make good sized peaches; a popular market sort; middle of September.

Early Rivers (Cling)—Large, creamy-white with delicate pink cheek; flesh melting with rich, racy flavor; one of the best for home or market.

***Elberta (Free)**—The great market peach of the Southwest; perfectly hardy in the North and is believed by many growers to be the best all around peach; color lemon-yellow with blush on sunny side; flesh pale yellow, tender and juicy; tree vigorous; a good shipping peach.

***Fitzgerald (Free)**—An improved early Crawford fully equal to it in size, quality and color; tree bears quite young, is productive and very hardy; bright yellow splashed with red; flesh deep yellow and of the best quality; early September.



Champion

Foster (Free)—Large, deep orange-red, becoming quite dark red on sunny side; flesh yellow, rich and juicy with sub-acid flavor, firm; one of the best for drying or canning.

Globe (Free)—Large; flesh firm, juicy, rich and luscious; quality good. October.

Greensboro (Cling)—Large, rather roundish; yellow with splashes of bright red; highly colored in the sun; flesh white, very juicy and of good quality; ripens with Alexander.

Hale's Early (Semi-Cling)—Medium, greenish-white with red cheek; flesh white, melting and juicy; tree vigorous, healthy and an abundant bearer. July and August.

***Heath Cling (Cling)**—Very large, creamy white with delicate red blush; flesh white, slightly red at the pit; tender, juicy and sweet; a valuable sort for canning; early September.

Henrietta (Cling)—Very large; deep yellow and brownish-red in the sun; flesh deep yellow, firm, juicy and sweet; one of the latest clings and splendid for canning or market. September.

Hill's Chili (Free)—One of the best; medium to large, oval, yellow with red; flesh rather dry, but good; a valuable sort for drying. Sept.

Kalamazoo (Free)—Medium to large, oval; yellow striped with red and a thin bloom; flesh yellow, red at the pit, rich, vinous and of good quality. A valuable sort.

Lemon Cling (Cling)—Very large and beautiful lemon-shaped; light yellow with red in the sun; flesh firm, yellow and rich, sub-acid flavor. August.



German Prune Plum (See page 21)

Lemon Free (Free)—Large, roundish, often with pointed apex; light yellow with greenish-white tinge and thick bloom; flesh yellow, tender and good; a good canning sort.

Mountain Rose (Free)—Large, handsome; yellow with red cheek; flesh white and juicy; one of the best. August.

Muir (Free)—Large, pale yellow; flesh very firm and sweet; a valuable sort for drying.

Old Mixon Cling (Cling)—Large, pale yellow with red cheek; flesh juicy, rich and of high flavor; one of the best cling-stone peaches.

Old Mixon Free (Free)—Large, roundish, slightly oval; pale yellow with a deep red cheek; flesh tender, rich and good quality; succeeds well in all localities.

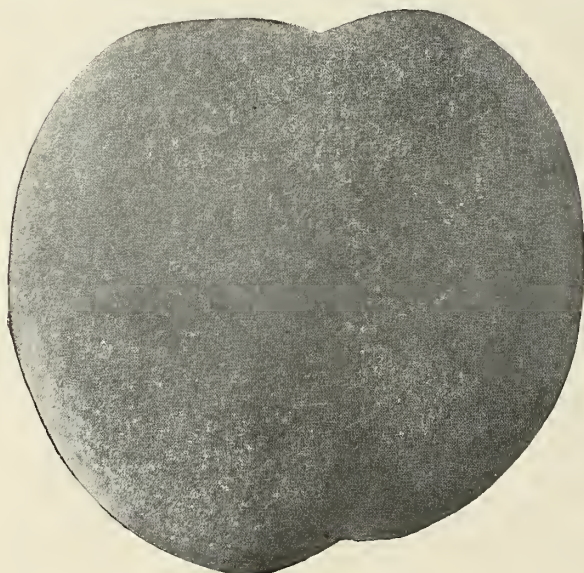
Picquet's Late (Free)—Large, round, yellow with red cheek; flesh yellow, red at pit, firm and very good; a great favorite in the South.

***Salway (Free)**—Large, roundish, deep yellow with rich red cheek; flesh yellow, firm and juicy, and sugary; a late market sort.

Smock (Free)—Large, roundish, somewhat oval; yellow with some blush and thick bloom; flesh yellow, tender and sprightly, quality good; a good commercial peach.

Sneed (Semi-Cling)—Medium, roundish-oval, creamy-white, splashed and mottled with bright red; flesh yellowish-white, tender, vinous and good; free from rot and ripens early.

Stump (Free)—Medium to large, roundish-oval; creamy-white with bright red cheek and abundant bloom; flesh white, very good.



Salway

***Triumph (Free)**—Medium to large, round, somewhat flattened; greenish-yellow, broken striped of purplish red and pink dots; flesh yellow with red stains, juicy, luscious and very good; one of the early sorts.

Wheatland (Free)—Large to very large, roundish, golden-yellow shaded on cheek with dark red and crimson; flesh yellow, red at the pit, firm, juicy and sweet; quality good, widely grown in Colorado and Utah.

Wonderful (Free)—Large, round, somewhat oval; yellow with carmine blush; flesh yellow, tender and high flavored; a good peach for home garden or shipping, late.

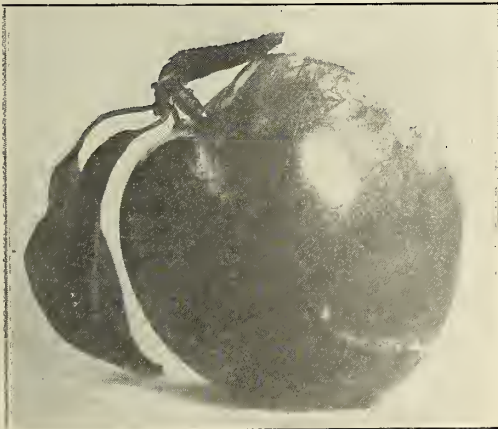
PLUMS

The plum like the pear and other finer fruits, succeeds best in heavy soil with some clay and being almost entirely free from disease, they can be grown very profitably. Of late years the demand has been growing very rapidly. The finer kinds are excellent dessert fruits of rich and luscious flavor, for cooking and canning they are unsurpassed. For home consumption they should be allowed to remain on the trees until fully ripe, but for shipping they should be gathered a few days earlier. Some of the varieties are inclined to overbear and should be thinned in order to produce perfect fruit. Most all the varieties, especially the native sorts, are extremely hardy and will withstand the most severe weather.

European Plums

***Bradshaw**—Very large, dark violet red; flesh yellowish-green, juicy and pleasant; tree vigorous, erect and productive. August.

Coe's Golden Drop—Large and handsome; light yellow, firm, rich and sweet; one of the best of the late plums. Late September.



Lombard

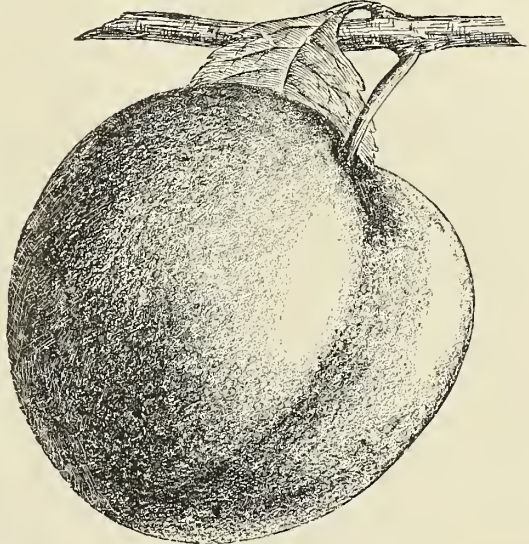
Fellenberg (Italian Prune)—Medium, oval, dark purple with dark blue bloom; flesh greenish-yellow, juicy, sweet and of good quality; freestone; will hang well on tree after ripening. Late August.

General Hand—Very large; roundish-oval, deep golden yellow; flesh moderately juicy, not high flavored; freestone. Mid-season.

***German Prune**—Medium oval, purplish-blue; rich, juicy and of high flavor; tree vigorous and very productive.

Gueii—Large, roundish-oval, dark purple, flesh firm, a little coarse and sub-acid. A valuable sort for cooking and market. September.

Hungarian Prune—Large, oval, skin thick, reddish-violet with brown dots and handsome bloom; somewhat coarse, juicy and moderately rich; tree vigorous; a very showy fruit. Mid-September.



Milton (See page 22)

Imperial Gage—Large, oval, yellowish-green with marbled green stripes, heavy white bloom, flesh greenish, juicy, melting, rich and best quality; tree upright and vigorous. Sept.

***Lombard**—Medium, roundish-oval, violet-red, juicy and pleasant; adheres to stone; a valuable market sort, hardy and adapted to light soils; nearly always produces a crop.

***Moore's Arctic**—Grows in large clusters, large, dark purple; flesh very fine; splendid for preserving and dessert; tree vigorous and prolific; fruit is a long keeper.

Peach—Very large and handsome, dull red; flesh good; tree very productive and vigorous. Late August.

Pond's Seedling—See Hungarian Prune.

Reine Claude (Green Gage)—Small, yellowish-green when mature, flesh pale green, melting, luscious and best quality; considered the standard of excellence; tree a moderate grower. Mid-August.

***Shropshire Damson**—One of the best for preserving; flesh amber colored; juicy and spicy; tree vigorous, hardy and an abundant bearer.

Shipper's Pride—Large, nearly round, dark purple, juicy and sweet; a splendid shipper and good market variety; tree moderate grower, but productive.

Yellow Egg—A very large and beautiful egg-shaped yellow plum; a little coarse, but excellent for cooking; tree a free grower and very productive. Late August.

Japan Plums

Abundance—One of the best Japan plums. Tree is a very rapid grower, healthy and comes into bearing quite young and yields abundantly; medium size, rich, bright cherry-red with distinct bloom and highly perfumed; flesh light yellow, juicy and tender and excellent quality; tree vigorous and hardy.

***Burbank**—Medium to large, orange-yellow, dotted and marbled with red; flesh meaty, yellow, sweet and good; valuable for canning and a good market plum; mid-June. Hardest and most prolific of the Japan varieties.

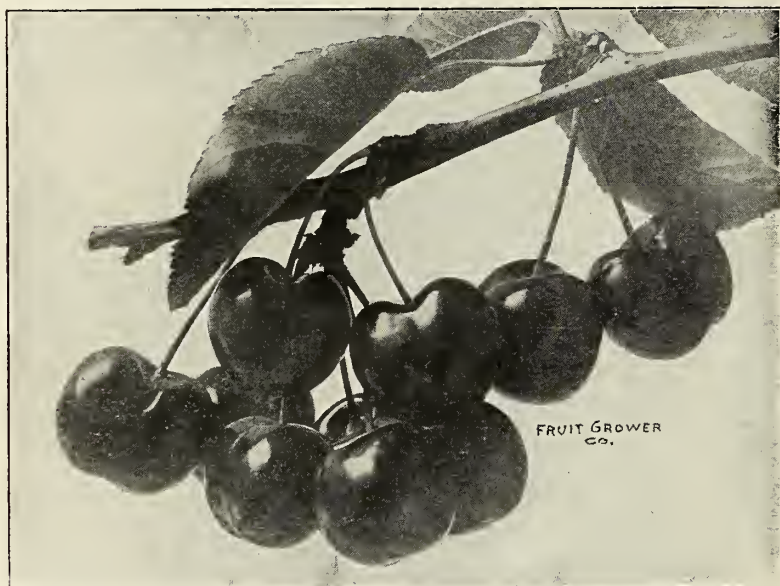
Ogon—Medium, roundish, lemon-yellow with a heavy white bloom; flesh very firm with a peculiar musky almond flavor, indifferent quality, but good for canning. Mid-season.

Klondike—Medium to small, roundish-oval, bright yellow shaded with red and many small dots; flesh juicy, pleasant, sub-acid; quality good; early August.

Milton—Large, fine, deep red, skin thin, and flesh firm; good quality; ripens about a week earlier than Wild Goose; a strong grower, and very productive; clingstone; extremely hardy.

Miner—Medium to large, roundish-oblong; dull purplish-red with many small yellow and gray dots; flesh amber colored, soft, juicy, rich, but some astringency when cooked, poor bearer when not intermingled with other varieties.

Pottawattamie—Medium to small, roundish-oval, bright red with light colored dots and thin bloom; flesh yellow, sweet and juicy; quality good; not hardy in the North.



Cherries—Black Tartarian (See page 23)

Satsuma—Large, roundish-oval with a short blunt point; dark red, specked with greenish dots; flesh very firm, blood-red, rather coarse but good. A good canning plum. Season late and a long keeper.

Wickson—Large, heart-shaped, deep maroon-red; flesh very firm, yellow, sub-acid, rich and good; a good shipping plum; tree upright, but in some localities a shy bearer.

Native Plums

Cheney—Large, roundish, oblong, deep mottled red on greenish-yellow ground; blue bloom; flesh yellow, firm and of good quality. Middle of August.

***De Soto**—Large, oval, orange overlaid with crimson, numerous dots and thin blue bloom; flesh firm, juicy and high-flavored; one of the best natives in quality.

***Forest Garden**—Large, nearly round, deep red when fully ripe with numerous yellow specks; flesh firm, sub-acid, good quality; season late.

Hammer—Medium to large, crimson with yellow dots, blue bloom; a valuable sort as the tree is hardy and an immense bearer. September.

Quaker—Very large, roundish, oval, purplish-red with yellow dots and blue bloom; flesh yellow, firm and sweet; quality excellent.

Rockford—Medium to small, oval, dark red with numerous small dots, thick lilac bloom; flesh meaty, firm, not very juicy, quality good.

***Surprise**—Large, roundish-oval, dark red with many small yellow dots; flesh pale yellow, firm and of good quality.

Weaver—Large, oblong, flattened at ends, dark mottled red with purplish bloom; flesh firm; meaty and very good; a constant and regular bearer and very hardy.

***Wild Goose**—Medium to large; roundish-oblong, skin light red and shining, making an attractive market plum; flesh yellow, pulpy and sweet; very popular, but a poor fertilizer, should be planted with other trees of abundant pollen.

Wolf—Medium to large, yellow mottled with red; flesh yellow, firm and good quality; tree vigorous and a prolific bearer.

***Wyant**—Medium to large, oblong, purple-red on yellow ground; flesh firm and good quality; one of the most popular of the American sorts.

CHERRIES

There are few more desirable fruits than the Cherry. They are being planted more and more each year and there is always a brisk demand on the market for good fruit. Aside from their fruit value, they make very ornamental trees for the lawn, especially the Heart and Biggereau varieties, which are strong, vigorous growers, with large glassy leaves, and open, spreading heads. Cherries thrive in most any dry or well drained soil; the fruit is delicious whether eaten out of hand or preserved. No home garden is complete without a few cherry trees.

Baldwin—One of the best of the Morello type; very large, round, color dark yet almost transparent, stem quite large, medium in length; fruits usually in pairs; flesh sub-acid and very good; it fruits early, is hardy; very productive.

Bell Magnifique—Medium to large; heart-shaped, pinkish-red and yellow; stem one and one-half to two inches long, cavity deep, flesh firm, white, juice uncolored, about the same in hardiness as Dyehouse. July.

* **Bing**—A new black cherry; originated in Oregon; size large, color blackish purple; flesh very solid and of the highest flavor; tree vigorous, upright, hardy and productive; a fine shipping and market cherry.

* **Black Tartarian**—Very large, bright purplish-black; half tender, juicy, very rich and flavor excellent; tree a vigorous grower and producer. June.

Dyehouse—Partakes of both the Duke and Morello in wood and fruit; a very early and sure bearer; ripens a week earlier than Early Richmond.

* **Early Richmond**—Medium size, dark red, melting and juicy, acid flavor; one of the most valuable and popular of the acid cherries and is unsurpassed for cooking; tree slender grower, exceedingly productive and very hardy; will stand the most severe weather.

* **English Morello**—Medium to large, roundish; dark red, nearly black when ripe; flesh purplish-red, meaty, juicy, slightly astringent and good; very productive. August.



Large Montmorency

Governor Wood—Large, rich, light yellow with red cheek, juicy and sweet; late June.

* **Lambert**—One of the largest known, smooth, glassy, dark purplish-red with numerous russet dots; flesh dark purplish-red with whitish veins, firm, meaty; flavor sweet, rich and highest quality; form roundish, heart-shaped; tree hardy and vigorous; a good shipping variety.

* **Large Montmorency**—Large, roundish, red; flesh tender, mildly acid and good quality, larger than Early Richmond and about ten days later; one of the popular sorts; late June.

Late Duke—Large, heart-shaped, dark handsome red when fully ripe; flesh light colored, sub-acid; flavor good; one of the latest.

* **Napoleon Bigarreau (Royal Ann)**—A beautiful cherry of large size; pale yellow with bright red cheek; flesh firm, juicy and sweet; one of the best for market and canning. Late.

Ostheim—Large, roundish, one side compressed, dark red and much darker when fully ripe; flesh liver colored, tender, juicy, sub-acid and very good; early and ripens over a long period.



Early Richmond

***Wragg**—Large, roundish, heart-shaped; dark crimson and when fully ripe, black or nearly so; flesh and juice light crimson, firm and good, very productive; one of the hardiest and is usually a sure cropper.

Yellow Spanish—Large, pale yellow with red cheek; flesh firm, juicy and excellent; one of the best light colored cherries; vigorous and productive; late June.

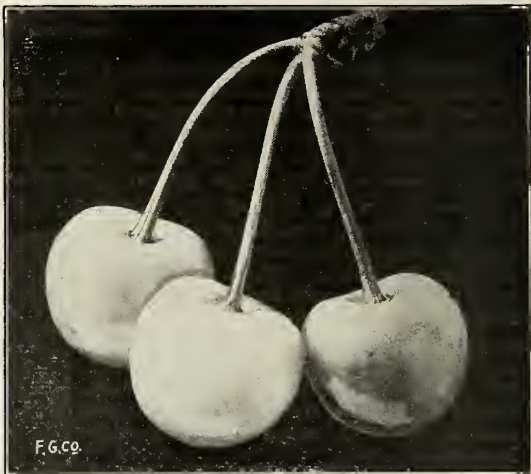
COMPASS CHERRY-PLUM

***Compass Cherry-Plum**—Originated at Springfield, Minnesota, by M. H. Knudson, through scientific hybridization by applying pollen of the English Morello Cherry and Miner Plum to the blossom of the Sand Cherry (*Prunus Besseyi*). It is absolutely hardy, wonderfully prolific, frequently producing fruit on young trees in nursery row. In shape, size and coloring of the fruit the characteristics of the Plum and Cherry are about equally divided. Color bright red, deepening as it becomes well ripened, until it reaches a rich dark wine color. Valuable for canning and preserving.

The Compass fills a unique place in the North, where it stands today as the principal hardy fruit approaching the Cherry, and is especially recommended for planting where Cherries of the Morello type are not successful.

DWARF ROCKY MOUNTAIN CHERRY

(*Prunus Pumila Besseyi*)—A very hardy native dwarf Cherry, growing in shrub form. Bears large crops of medium sized black Cherries, which when fully ripe are of fair quality; used for cooking and preserving with good results.



Napoleon—See page 22.

APRICOTS

A beautiful and delicious fruit; a close relative of the plum and peach, combining the qualities of both. The fruit ripens after the early cherries and just before the plums and peaches; Tree is as hardy as the peach and requires about the same cultivation. It ships well and commands a good price in the markets and for drying and canning, it has no superior. The Russian varieties are the most hardy, earliest and most productive.

***Alexander** (Russian) — Medium to small, light orange, yellow flecked with red; flesh tender, juicy, sweet and good quality; hardy; very productive. July.

Budd (Russian)—Medium to large; light orange with bluish on sunny side; flesh sweet, juicy with flavor of the peach; hardy and productive. August.

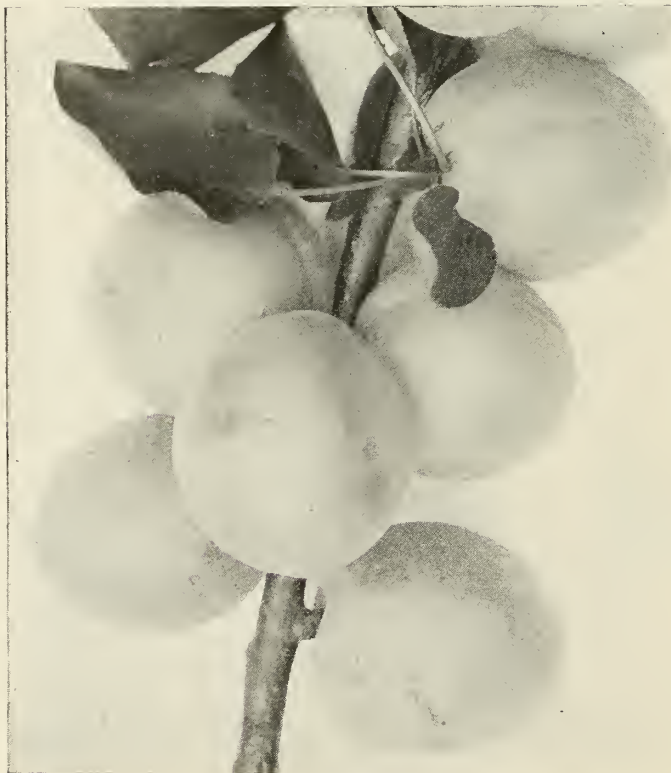
Early Golden — Small, roundish-oval; pale orange with smooth skin; flesh yellow, juicy, sweet and of the best quality; hardy and productive; freestone.

Harris—Large, oval, bright yellow with red cheek; flesh tender, juicy, sweet and good, tree hardy, productive. Late July.

***Moorpark**—One of the largest; orange yellow with numerous specks and dots; flesh yellow, sweet, juicy and rich; tree somewhat tender and inclined to ripen unevenly. August.

Royal—Large, roundish-oval; pale orange with faintly tinged red cheek; flesh yellow, firm, sweet, high flavored, slightly sub-acid and good quality, ripens a week earlier than Moorpark; a good market variety.

Superb (Russian) — Medium, roundish-oval, smooth, light salmon with numerous red or russet dots; flesh yellow, firm, sub-acid and good; tree hardy and productive; middle of July.



Moorpark

NECTARINES

This fruit may be described simply as a smooth skinned peach. It will thrive wherever peaches do, and is much superior to the peach as a dryer and makes excellent preserves. The propagation and management are the same as for the peach.

Boston—Large, roundish-oval; light yellow with bright red cheek; flesh yellow to the stone, sweet with a pleasant peculiar flavor; free-stone; one of the most valued sorts for market.

Downton—Large, roundish-oval; pale green with violet cheek; flesh pale green with some red at the pit; melting, rich and very good; freestone.

QUINCES

The quince is attracting a good deal of attention as a market fruit. The tree is hardy and compact in growth and requires little space; is productive, gives regular crops and comes into bearing early; the fruit is much sought for canning. When put up in the proportion of one quart of quinces to about four quarts of other fruit, it imparts a delicious flavor. It will grow in any good garden soil, which should be kept mellow, and well enriched. Fruit should be thinned out if it bears too freely.

Angers—Size medium, pear shaped, golden-yellow, rather acid; tree a thrifty grower and bears abundantly. October.

Bourgeat—Very large, smooth, golden yellow, tender and is a good keeper, very productive and healthy. October.



American Sweet Chestnuts

***Champion**—Very large and handsome; flesh cooks as tender as an apple without hard spots; flavor delicate; tree very handsome and bears abundantly; one of the most valuable sorts; color greenish-yellow.

Meech's Prolific—Very large, bright yellow, quality very good and quite fragrant; bears early and is very productive; one of the best. Mid-season.

***Orange**—Large, roundish, somewhat irregular with a small and short neck at the base; fine golden-yellow flesh and of excellent flavor. October.

Rea's Mammoth—Very large, roundish, color yellow with pinkish shades, excellent quality; tree a strong grower with dark foliage; bears well and early.

MULBERRIES

The Mulberry is valued as an ornamental shade tree and the fruit is quite popular in some sections. Should be planted in deep, rich sandy loam. Requires little care and is of easy culture. The fruit is sprightly and refreshing and is a valuable addition to any fruit garden.

***Downing's Everbearing**—A beautiful tree for the lawn or street; bears an abundant supply of sweet, refreshing fruit for several weeks; berries are about one and one-half inches long; color blue-black.

Hick's Everbearing—Much like Downing in color, size and quality.

***New American**—Equal to Downing in all respects and a much harder tree; vigorous grower and very productive; ripe from middle of June until September; color black.

***Russian**—A very hardy rapid-growing, limber tree of great value, especially in the West; foliage abundant and said to be very desirable for silk worm culture; fruit good size and produced in large quantities. Introduced into this country by the Minnonites.

White—This is the variety used most for feeding silk worms; it forms a large spreading tree.

NUT TREES

There has been more attention paid to the planting of nut trees the last few years than ever before. Few farms but contain land, that if planted to nut-bearing trees, would pay better than anything else to which it could be devoted. Besides the value of the wood for commercial purposes, the crop of nuts of nearly all kinds command a high price in the market.

Butternut (White Walnut)—A native of the Eastern states. It is a beautiful growing tree and yields a large nut with a rough hard shell within which are full white oily kernels, sweet, rich and of the most delicate flavor; tree has a wide spreading head, reddish colored, dark foliage; is a native of this country and well adapted to nearly all sections.

Chestnuts (American Sweet)—The American Sweet Chestnut is much superior to both the European and Japanese kinds, although it does not, as yet, approach in size to either of them. Chestnuts are much easier to propagate than other nut trees and come into bearing earlier. It does not do well in lime stone or clayey soils, or in wet boggy land. The nut is sweet and well flavored; makes a valuable shade tree for either street or lawn.

WALNUTS

Black Walnut (*Juglans Nigra*)—This species is a common and stately forest tree in the Middle and Western states; grows from forty to sixty feet high; has an open, spreading head and is rapid in growth; produces large crops of nuts with rough hard shell containing rich oily kernels of fine flavor.

Japanese Varieties

Cordiformis—This is as its name indicates, a heart-shaped nut, meats are large, good quality and easily removed; flavor is between that of an English Walnut and a Butternut; used extensively by confectioners.

Sieboldiana—If it produced no nuts, it would be well worth cultivating as an ornamental tree; is a vigorous grower and produces nuts borne in clusters of 12 to 15 each; has a smooth shell, thicker than the English, much resembling Pecans; meat is sweet and good flavor; tree is perfectly hardy.



Japanese Walnut—Cordiformis

PECANS

Pecan culture offers greater inducements, perhaps, than any other line of horticulture, when we consider the permanency of the tree and its comparative freedom from disease and insect pests, together with its comparatively regular bearing habit of a very superior and high priced product. With the trees planted fifty feet apart, the cost of planting and after care is comparatively light and the land may be cropped for several years, allowing the trees more room as they grow and need it.

Good budded or grafted trees of good prolific varieties properly planted and cared for under proper conditions, usually begin to bear a few nuts in five or six years after planting, and should produce a profitable crop in eight or ten years from planting, after which the yield



Pecan

increases rapidly, so that it is not only possible, but probable, that the orchard would produce in one year a crop which would sell for as much or more than the entire cost of growing the orchard, when the trees were fifteen to twenty years old.

The pecan can doubtless be grown with more or less success anywhere where cotton is

grown, and special varieties will doubtless succeed farther north, but if it is desired to grow them for market on a large scale it is advisable to plant in the lower half of the Gulf Coast States, as here they attain to their highest development, and the tree is of much more rapid growth than farther North. Good crops are being produced in Southern Missouri and elsewhere along the same parallel. There is a great diversity of opinion as to the best soils for the growing of pecans, and while we believe that they can be successfully grown on our rich, moist, alluvial soils with less care and expense, after the trees are well established, there is no question but that they can be grown profitably on the uplands and light, sandy loam soils.

The pecan is a very deep-rooted, hardy, long-lived tree, and is infested with fewer insect pests or diseases, perhaps, than any other fruit or nut tree of anything like equal importance; and when planted on land naturally rich and moist, the tree will thrive with little care or attention after well established, but there is no tree that responds more liberally to good treatment than does the pecan. The trees should always have good care until well established, and even on land naturally rich, a little fertilizer or stable manure will help the trees to form a new root system and get into vigorous growth. The tree should be allowed to grow at will for a year or two or until it has put out a good root system and is making a vigorous growth. Pruning and trying to shape or head up the tree before it has recovered fully from transplanting will only retard the root development and subsequent growth. After the tree has recovered fully from transplanting and is growing vigorously, they may be made to shape up and head as we wish, after which no pruning is needed, unless it be to remove an interfering limb occasionally. We are prepared to furnish the best seedling and grafted stock.

GRAPES

Everyone should have a few grape vines in the home garden. They require very little cultivation and the returns are so abundant. If proper selection of varieties is made, one may have grapes on the table for several months in the year. They can be trained over fences, trellises, or doorways and thus be ornamental as well as useful. To grow for market, they can be planted on hillsides that are unsuitable for other crops. They should in all cases have a free exposure to the sun and air.

Agawam (Red)—Bunch large, compact, shouldered, berry large, dark red or nearly black; flesh tender, juicy, vinous and good quality; later than Concord.

***Brighton (Red)**—Bunch medium to large, quite compact, flesh rich, sweet and best quality, color dark crimson or brownish red; vine vigorous and hardy.

Campbell's Early (Black)—A strong, vigorous and hardy sort; ripens early and bears abundantly; berry large, black with blue bloom; tender, sweet and rich; good market berry; it is a good shipper and long keeper.

Catawba (Red)—Bunches medium, shouldered; berries large, deep coppery red, becoming purple when ripe; flesh somewhat pulpy, juicy, sweet, aromatic and rich; one of the latest, does not ripen well in the North.

Champion (Black)—Bunch medium, compact; berries medium, quality fair; on account of the vigor of vine, showy fruit and heavy bearing, it is extensively grown for market.

Clinton (Black)—Bunches, medium, compact; berries round, small with thin blue bloom, pulpy and juicy; hardy and late; good keeper and valuable as a wine grape.

***Concord (Black)**—Too well-known to need much description; is considered by many to be the best all around grape grown; is extremely hardy, vigorous and productive, bunches large, compact; berries large, juicy, buttery and sweet; will succeed well almost anywhere.



Agawam

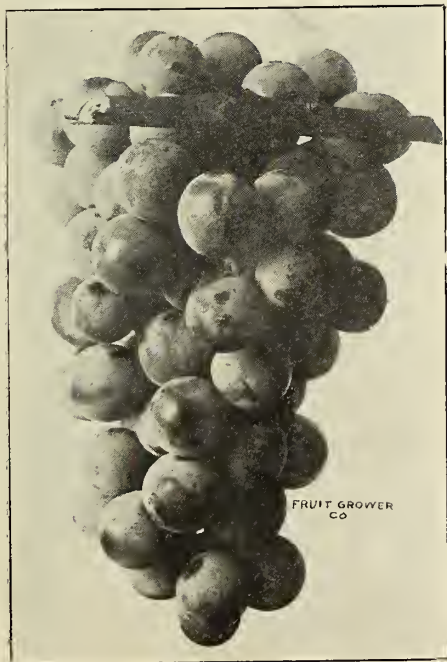
Delaware (Red)—One of the best red grapes; bunch small and compact, berry small, round, beautiful light red; flesh rich, vinous, sweet, and delicious; best quality; a good market grape.

Elvira (White)—Bunch medium, shouldered and very compact; berry medium, pale green with yellow shade, sweet, tender and free from foxiness; in the West it is grown as a wine grape.

Empire State (White)—Bunch long and large, berry medium, light green or white tinged with yellow and covered with a white bloom; tender, sweet and sprightly; good keeper.

Green Mountain (White)—The earliest white grape; bunch medium to large, shouldered; berries medium, greenish white, tender, sweet and excellent quality, combines hardness, fruitfulness and vigor and health. A valuable sort.

Janesville (Black)—Its hardiness, vigor and productiveness has made it one of the best black sorts. It is especially adapted to the North; bunch medium to large, short and shouldered; berries round with slight blue bloom, tender and vinous; quality fair.



Moore's Early

Lindley (Red)—Bunch large, long and compact; berry medium, pale red with violet bloom, sweet, juicy, high-flavored and good, hardy and vigorous.

Martha (White)—One of the most reliable white grapes; bunch medium, compact and shouldered; berry medium, greenish yellow with bloom, sweet, juicy and tender; ripens a little earlier than Concord.

Moore's Diamond (White)—A vigorous grower entirely free from mildew and a prolific bearer; bunches large and compact, slightly shouldered; color delicate greenish-white with yellow tinge when ripe; berries tender, juicy and nearly transparent, sweet and rich; ripens about two weeks before Concord.

***Moore's Early (Black)**—Bunch large, berry round with a heavy blue bloom, quality said to be better than Concord; hardy and prolific; a good market berry; ripens about two weeks before Concord.

***Niagara (White)**—One of the leading white sorts; bunch large, shouldered, compact; berry large, yellowish white, juicy, vinous and sprightly, quality good; skin tough, making it a good shipper and market berry.

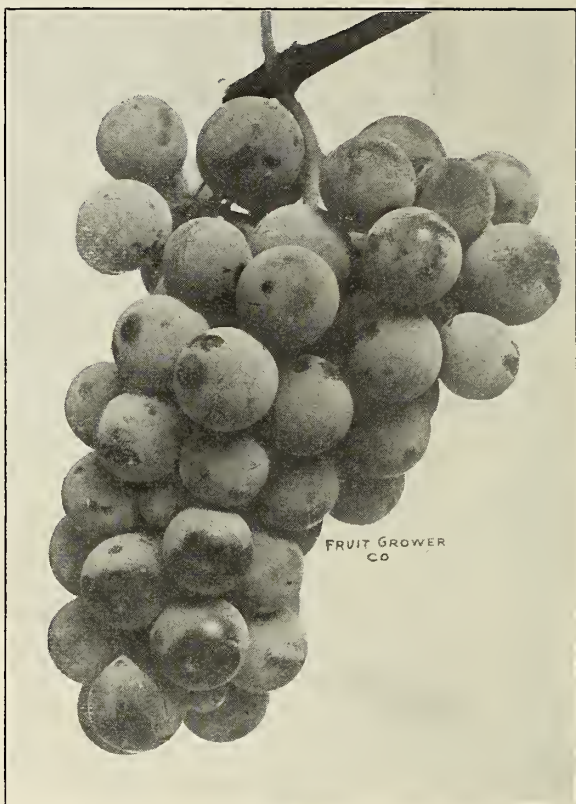
Pocklington (White)—The great vigor and hardiness of the vine with the beauty and size of the clusters, place this in the front rank of white grapes; berry a light lemon-yellow, tender, sweet and fine aromatic flavor; very prolific.

Salem (Red)—Bunch medium, shouldered and compact; vine strong and vigorous; berry large, coppery red, thin skin, sweet and sprightly; a good market berry; ripens in September.

Vergennes (Red)—Bunch large and compact; berry large, amber red with grayish bloom, tender, vinous, rich and very good; a long keeper; splendid market grape.

Wilder (Black)—Bunch large, compact and generally shouldered; berry large, black with a thin blue bloom, tender, sweet, slightly aromatic and very good.

***Worden (Black)**—A seedling of the Concord; bunch large and compact, berry round, black



Worden

with blue bloom, pulpy, juicy and very pleasant; ripens several days earlier than Concord.

Woodruff (Red)—Bunch very large, shouldered and roundish, berries round, red with some bloom, juicy, sub-acid and good.

Wyoming (Red)—Bunch rather small and compact; berry medium, red, brighter than Delaware; tender, juicy, sweet and very good; hardy, vigorous and prolific; one of the best early red grapes.

RASPBERRIES

The Raspberry is one of the most delicious and popular fruits grown. They are always in demand in season and command good prices on the market. For canning purposes they are unexcelled. They are easily cultivated and require little care. Cut out the old and weak shoots each year; plant in good soil in hills about four feet apart. With a little care and attention they will produce large crops of berries. For winter protection, bend the canes over and cover with straw or leaves and remove early in the spring.

Brandywine (Red)—Large, bright and very firm; a good market berry and valuable for its shipping qualities.

***Cardinal (Red)**—One of the new sorts; it is extremely hardy and productive; fruit is rich, red and highly flavored. It is the opinion of leading horticulturists that it is the best of the good varieties now being grown.

Columbian (Red)—Resembles the Shaffer, but is much better; the berry is firmer, dark red and adheres to the bushes much longer; a

strong grower, attaining large size; one of the hardest and most productive and stands at the head for canning, jams, etc.

Cumberland (Black)—The largest of all black caps; a healthy, vigorous grower, throwing up stout, stocky, well branched canes that produce immense crops of magnificent berries. Fruit very large, firm, quality about the same as Gregg; keeps and ships as well as any of the blacks. The most profitable market variety.

***Cuthbert** (Red)—Large, bright scarlet-crimson, excellent quality, firm, juicy and refreshing, vigorous grower, hardy and productive; very popular as a home garden and market berry.

Eureka (Black)—Berry medium to large, round, firm, juicy and good quality; has a long season and is valued as a splendid market sort.

***Gregg** (Black)—Of good size, fine quality, productive and hardy, firm, sweet and rich; strong grower and good bearer; ripens late and evenly; good market berry.

***Kansas** (Black)—Large, round, firm, moderately juicy, strong grower and very productive; ripens early; considered one of the best market berries on account of its handsome appearance.

***Loudon** (Red)—Large, firm and of good quality; dark crimson; very productive, hardy and vigorous.

***Marlboro** (Red)—The largest early red; bright scarlet, sub-acid, pleasant and good; hardy and productive.

Miller (Red)—Bright red color; is a healthy, vigorous grower, canes strong, well adapted to carrying their heavy load of berries, firm and a good shipper; an early ripener.

Minnetonka-Ironclad (Red)—Medium size, bright scarlet, sweet, rich and good quality; considered by some to be equal to Turner and in some places better.

Munger (Black)—Resembles the Gregg; excels it in size and flavor and also a better shipper; sweet, juicy and good; large and of fine quality; a strong, vigorous grower and extremely hardy.

Older (Black)—One of the lately introduced varieties which has been receiving considerable attention in the Northwest. Ripens a trifle in advance of Gregg. Fruit similar to



Cumberland (See page 28)

Gregg in size, but is very distinct from all other black caps in general appearance; jet black, sweet and of excellent quality; hardy; adheres well to the bush.

***Plum Farmer** (Black)—A vigorous, stocky growing black cap, very healthy and attractive in appearance; productive, bearing heavy crops of large, fine jet black berries; excellent quality and a good shipper; one of the most valuable market berries, as it commands top prices.

Turner (Red)—A fine old variety and a general favorite everywhere; owing to its good size, fine appearance and great productiveness is a profitable market sort; a strong grower and produces good crops annually.

CURRENTS

The currant is one of the most valued of the small fruits. They mature just before Raspberries and can be used either raw or cooked. Being very hardy, they do not winter-kill and are easy of cultivation, requiring little care. They can be grown in any good garden soil.

Black Champion—Very productive, large bunch and berry, excellent quality, and a strong grower.

Black Naples—Very large, black, rich, tender and excellent for jellies and wine; very productive.



Cardinal (See page 28)



Wilder

Long Bunch Holland—One of the best late varieties; bush very vigorous and hardy, clusters long, berry medium to large, bright red and good quality.

Black Victoria—An English variety of exceptional merit; said to be the largest black currant in cultivation; good flavor and very productive.

***Cherry**—Large, deep red, rather acid, branches short, very productive.

Cr Randall—A seedling of the Missouri River wild currant, much larger and much more prolific.

***Fay's Prolific**—A cross between the Cherry and Victoria; one of the most popular of the red currants and immensely prolific.

***Lee Prolific**—A new English variety; the fruit is large and of superior quality; vigorous and immensely productive; is classed with the black varieties.

plenty of pulp and few seeds, clusters are long and size of berry is maintained to the end.
Pomona—Fruit of good size and flavor, bright red, has long stems and hangs in fine condition after ripening; is a good shipper; bush bears early and is wonderfully prolific; a good market sort.

***Red Cross**—A strong growing variety with long clusters; berry medium to large, bright red, mild, good quality and fine flavor.

Red Dutch—An old well-known standard variety; berries dark red, sub-acid and sprightly flavor; clusters medium to large.

Versailles—A French variety resembling the Cherry; deep red, bunch and berry large and handsome; very productive.

Victoria—Clusters medium, berries medium to large, bright red, mild sub-acid; one of the most valuable late varieties.

White Dutch—Clusters two to three inches long, berries medium, translucent, a little darker than white grape; quality excellent and ripens early, vigorous and productive.

***White Grape**—Bush vigorous and productive; clusters long; berries large, very attractive, mild flavor and good quality; a good table variety. Distinct from White Dutch.

***Wilder**—Clusters above medium length and berries large, bright red, of excellent quality, with mild, sub-acid flavor; ripens early and is a good keeper.

GOOSEBERRIES

This fruit is very useful for cooking either green or ripe and is used for canning extensively. Requires the same cultivation and treatment as Currants.



Downing

North Star—Said to be the strongest grower among the red varieties; bunches average four inches in length and are freely produced; extra quality and extremely hardy.

***Perfection**—Berries are a beautiful bright red and larger than Fay's Prolific. In quality it is said to be superior to anything in the market today; rich, mild, sub-acid flavor, with

Champion (Oregon)—Berries medium, round, smooth, greenish-white with thin transparent skin, good quality and ripens early; bush vigorous and very free from mildew.

***Downing**—Fruit large, round, light green with distinct veins, soft, juicy and finely flavored; vigorous and productive; smooth skin; one of the best.

***Houghton**—Medium size, pale red, sweet and juicy; vigorous grower, abundant bearer and free from mildew.

Industry—One of the best English varieties yet introduced; berries very large, dark red, hairy, rich and agreeable; bush vigorous and a great producer.



Eldorado

***Josselyn (Red Jacket)**—Large size, smooth and excellent quality; very hardy and a wonderful cropper.

Pearl—Similar to Downing, but fruit a little larger, very hardy, free from mildew and very productive; valuable for home use or market.

Smith's Improved—Bush moderately vigorous and very productive; fruit large, pale yellow and thin skin; excellent quality for dessert or cooking.

BLACKBERRIES

Blackberries are among the best-known and most valued of our berries. No fruit of any kind is more wholesome. A liberal use of berries and other good fruit will save doctors' bills. Blackberries should be planted in rows six or seven feet apart, three to four feet in the row. Keep the ground light, rich and clean, and pinch the canes back when they have reached four feet in height. The demand for blackberries is always good.

***Ancient Briton**—Large, oblong, sweet and very good; bush a sturdy grower, hardy and one of the most productive; one of the best sorts for the Middle West.

Blowers—Fruit large, productive; a strong grower; a promising new variety.

Early Harvest—One of the earliest, berry medium sized, good quality and very prolific; firm and attractive in appearance. A good market sort.

Eldorado—Vine is vigorous and hardy; berries are very large, black, borne in clusters; ripens well together; sweet, melting and pleasing to the taste.

***Erie**—One of the very best large new blackberries; absolutely hardy, very black, firm and solid; ripens early.

Kittatinny—Large, sometimes one and one-half inch in length; glossy black; flesh moderately firm, sweet, rich and excellent; canes are vigorous and hardy; very productive.

***Mersereau**—Large, oval, sparkling black, sweet, rich and melting, hardy and productive.

Rathbun—A strong, erect grower and hardy; fruit is sweet, luscious, without a hard core; high flavor; jet black, small seeds; firm enough to ship and handle well. One of the largest sized berries.

***Snyder**—The hardest blackberry known; fruit medium sized and of a good quality; a standard market variety.

Stone's Hardy—A vigorous grower; berry glossy black and of a good flavor. A little later than the Snyder; very hardy.

Taylor—Large, oblong, soft; juicy, sub-acid and rich; later than Snyder.

Wilson's Early—Very large, black, sweet, rich and good quality; ripens early and is productive.

DEWBERRIES

The Dewberry is a dwarf and trailing form of the Blackberry. The fruit is highly prized as a market fruit owing to its large size and fine quality. Set the plants two feet apart in the row and cover in winter with coarse litter. Should be mulched in the spring to keep them off the ground.

Austin—Glossy shining black color; flavor is most excellent and when fully ripe will fairly melt in your mouth; has the hardy characteristics of the Dewberry family; very productive.

***Lucretia**—Perfectly hardy and remarkably productive; said to be the best of this class of fruit; ripens early; is often one and one-half inches long by one inch in diameter; sweet, luscious and melting; this variety is recommended most highly.

Premo—Very large, jet black and good, crop ripens fast and evenly from seven to ten days earlier than Lucretia; is better and firmer in quality; an extra early sort.

STRAWBERRIES

Strawberries can be successfully grown in any good garden soil. It is easily placed in the front rank among small fruits and owing to the wide range in which it can be grown, there is always a good market for several weeks of the year. No fruit lends itself so readily to the varied uses of the table or for canning purposes or preserving. The varieties that we list are all standard and the best. "S" or staminate varieties fertilize themselves. "P" or pistillate varieties require to be planted with staminate in order to produce good crops.

***Bederwood (S)**—A very desirable early berry; medium to large, very firm, sweet and good; a vigorous grower and enormous yielder.

Brandywine (S)—A good market berry; medium to large; dark scarlet, firm and somewhat acid; a good bearer and does well in clay soil. Mid-season.

Bubach (P)—Large, conical and irregular; dark red or crimson, sweet and good quality; plant vigorous, healthy and a good bearer; popular as a home garden berry and nearby market. Mid-season.

Clyde (S)—One of the best; very large, bright dark scarlet; flesh firm, pinkish-white, quality good and a prolific bearer. Mid-season.



Lucretia Dewberry (See page 31)

Crescent (P)—Medium size, conical, light red or scarlet; seeds prominent; an old, well-known and popular variety; succeeds in all soils.

Gandy (S)—Large, regular and conical; bright glossy crimson, firm, fine flavor, vigorous and prolific; a fine late sort and a good shipper.

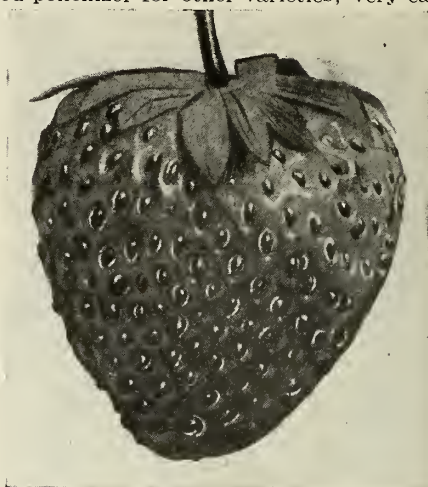
***Glen Mary (S)**—Berry is large to very large, conical and ribbed, crimson, flesh pinkish-white and good quality; plant strong, healthy and productive; ranks with the best in flavor. Mid-season.

Haverland (P)—Berries are large, long and light red, quality very good; a prolific bearer and plants are strong and healthy.

Lovett (S)—One of the best; large, conical, crimson, firm and sub-acid; remarkably pro-

ductive and plants strong and vigorous. A good shipping berry. Mid-season.

Michel's Early (S)—Small, dull red, flesh pink, firm and ships well; vigorous and prolific; a good pollinizer for other varieties; very early.



Senator Dunlap

W. W. W. (P)—As yet we have not fruited this variety, having grown it but one season. We have a neighbor who has fruited it and he will plant no other since he has tested the W. W. W. With us the plant is large, with a good root system. Our neighbor says the fruit is very large and of uniform size. Red clear through and of the very best quality. Said to be very firm and a good shipper. It is claimed the blossom is a very strong frost resister. (New.)

Senator Dunlap (S)—The great market berry, fruit medium to large, regular, bright glossy red; sweet and good quality; exceptionally



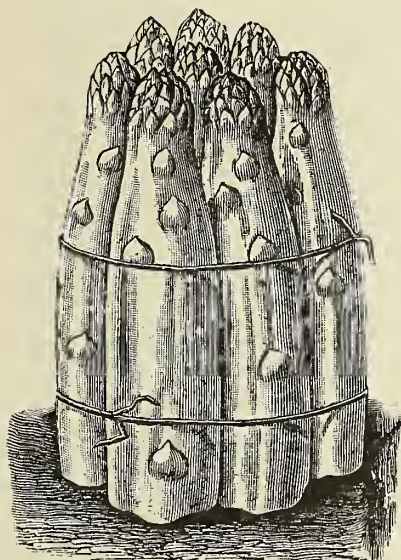
Gandy

firm, making it a good keeper and shipper; ripens early and continues a long time; immensely prolific. Mid-season.

***Warfield (P)**—Plant is a vigorous grower with long penetrating roots; a good berry for dry seasons; dark crimson, firm, sub-acid, and very good; popular as a market variety.

ASPARAGUS

This delicious and healthy vegetable should be found in every garden. Nothing can be more easily grown and no plant gives such a healthful food for such little outlay. Set in the fall or spring with the crown of the plant about three inches below the surface of the ground. Ten to twelve inches by two feet is a good distance to plant.



Columbian

Barr's Mammoth—The largest of all, is very early, and quite tender and delicious; light color. The yield is simply enormous.

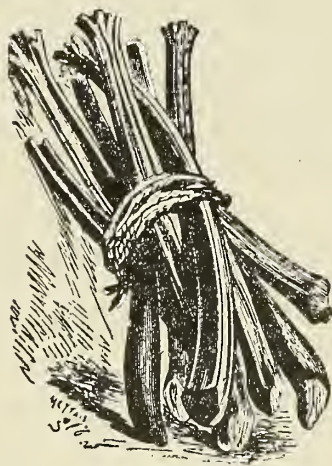
Columbian—A distinct variety of mammoth size, great yield and superior quality. Remarkable for the clear whiteness of its stalk which retains the clearness of its color until several inches above the surface.

Conover's Colossal—A standard kind of first-class quality. Tender and high flavored; valuable market and garden sort.

Palmetto—Extensively grown for market on account of earliness, large size and fine appearance.

RHUBARB OR PIE PLANT

This very desirable vegetable comes early in the spring. The large stems of the leaves are used for pie-making and stewing. It is also valuable for medicinal purposes. A deep, rich soil is indispensable to secure large, heavy stalks. Plant in rows four feet apart, with the plants three feet distant. Set so that the crowns are about one inch below the surface. Top dress in the fall with stable manure and fork under in the spring.



Rhubarb

Linneaus—This variety produces a small stem of fine quality; early; excellent for cooking.

Victoria—Very large and valuable for market. Early.



ORNAMENTAL DEPARTMENT



A great many people are beginning to realize that by expending a little time and study they can have well-kept and attractive grounds, adding to the beauty and comfort of the home and increasing the value of the property. If the grounds surrounding the house are extensive, beautiful effects can be produced by planting shade trees, shrubs, vines and flowers according to some pre-arranged plan. If the grounds are small, a few shrubs such as the Altheas, Hydrangeas, Spireas and other sorts can be used to good advantage. Vines trained over porches, trellises, fences, etc., can be made very effective at a small cost and give great comfort and satisfaction not only to yourself, but your neighbors. Real estate owners who have vacant property to sell are beginning to plant fine trees and shrubs, knowing that they can secure a larger percentage on their investment when the ground is sold, as purchasers will pay more for a fine looking lot than one given over to unsightly surroundings. We would also emphasize the fact that you should **buy none but the best**. Few people realize the importance of getting started right. A little thought will convince you that it is not the quantity, but the quality that counts. Buy none but the best stock, properly grown by reliable nurserymen, who have given their best thought to the careful propagation and best varieties. We have a large stock of all kinds of shade trees, ornamental shrubs, etc., that has been selected with the greatest care and attention, both as to variety and quality.

HOW TO PLANT

A fine, well-cut lawn is one of the handsomest features of a place. Do not make the mistake of planting at random all over the grounds. Trees and the larger shrubs may be planted along a lane or avenue leading to the house, or dotted about the lawn on lines radiating from it. This will secure light, air and a good view from the house. In laying out the grounds, take into consideration economy in labor, and make as few walks as possible. Upright shrubs, roses and flowers should be planted in clumps, each kind by itself, and avoid making the lawn look like a checker-board. These beds should be well cultivated and the plants pruned annually. Mass the trees and beds on the boundaries so as to leave a broad space for the lawn, and where there is a pretty view leave an opening. Where there is an unsightly object, conceal it by planting trees or climbing vines. Do not plant large trees near the house, except enough on the sunny side for shade.

Plant shrubs and small trees twice as thick as they should be when fully grown. This will make a good showing at once, and when the growth of the plants has made them too thick, some should be taken out. It will not do to plant so little that years must elapse before a fine effect can be produced, but, by planting a surplus at first, they can gradually be taken out.

VINES

Should be planted near to and allowed to climb upon and about the house, or trained on posts, trellises, arbors or stakes placed in suitable locations on the lawn.

Groups of trees and shrubs possessing bright-colored bark or foliage, and groups of flowering trees and shrubs, are highly effective when in blossom and should be more generally planted.

Weeping trees are especially desirable on small lawns.

NEW VARIETIES

We are constantly adding to our list of ornamentals, as well as in other departments. Before placing new varieties on the market, we give them a thorough trial in the nursery, and thus weed out undesirable varieties, offering only the best in each class.

VARIETIES NOT LISTED

In every large, well-conducted nursery there are many varieties of extra size, but in too small quantities to list in the catalogue; also new varieties which have not been thoroughly tested. If you wish any variety in a special size or variety not listed, write to us for special quotations, and if we have it in stock, we shall be pleased to supply.

Upright Deciduous Trees

AILANTHUS. Tree of Heaven

A. Glandulosa—From Japan. A lofty, rapid-growing tree, with long, elegant, feathery foliage, free from all diseases and insects. One of the most distinct of ornamental trees.

ASH. Fraxinus

American White Ash (F. Americana)—A well-known native tree; tall, very straight, with broad, round head and dense foliage.

Green Ash (F. Lanceolata; F. Viridis)—A tree of medium size with slender, spreading branches forming a shapely round head; grows 50 to 60 feet high.

BEECH. Fagus

American Beech (F. Ferruginea)—A large, stately native tree with smooth bark, spreading branches and symmetrical head; grows 80 to 100 feet high; one of the handsomest trees for lawns or streets.

Purple-Leaved Beech (F. Purpurea)—Originated in Germany. An elegant, vigorous tree, growing 50 to 60 feet high; the foliage in spring is a deep purple, changing to crimson in the fall.

BIRCH. Betula

European White Birch (B. Alba)—Remarkable for its elegance. A graceful tree with silvery bark and slender branches; quite erect when young, but afterwards assumes an elegant drooping habit, rendering it very effective for landscapes or lawns.

Purple-Leaved Birch (B. Atropurpurea)—A variety possessing the vigorous habit of the birches and having purple foliage; branches slightly pendulous.

CATALPA

Chinese Catalpa (C. Bungei)—A remarkable species forming a dense, round umbrella-like head; makes a beautiful lawn tree when grafted or budded on a high stem.

Hardy Catalpa (C. Speciosa)—A variety which is said to have originated in the West; it is very hardy and a rapid grower and is being extensively planted for commercial purposes; has broad deep green leaves and beautiful large blossoms, making it a highly ornamental tree for lawn or street. Valuable for planting in groves for growing poles, posts and railroad ties.

CHERRY. Cerasus

Double White Flowering Cherry (C. Avium, alba flore pleno)—At the period of flowering in May is a beautiful and attractive tree; the flowers are numerous and present to the eye nothing but a mass of bloom; valuable variety.

CHESTNUT. Castanea

American Sweet Chestnut (C. Americana)—The well-known variety. A stately tree with



Catalpa Bungei

spreading head; when in full bloom, one of the handsomest trees; produces a quantity of edible nuts.

CHESTNUT, HORSE. Aesculus

Common or White Flowering (A. Hippocastanum)—A handsome tree of regular form with showy foliage and covered in the spring with panicles of white flowers marked with red. As a lawn or street tree it has no superior.

Double Flowering Horse Chestnut (A. H. var. alba flore pleno)—A superb tree with double white flowers in large panicles and of fine

pyramidal habit; it is one of the best of the ornamental trees.

Ohio Buckeye (*A. Glabra*)—A native of the Western states forming a large sized tree; leaves are smooth and the flowers yellow; blooms before other varieties.

Red Flowering Horse Chestnut (*A. H. var. rubicunda*)—One of the finest trees in cultivation; flowers a showy red; blooms a little later than the white; when the two varieties are planted together they make a very effective contrast.

CRAB. *Pyrus*

Bechtel's Double Flowering Crab (*P. Angustifolia*)—One of the most beautiful of the flowering crabs; tree of medium size, covered in early spring with large, beautiful fragrant flowers of a delicate pink color; very popular for lawns, as it blooms when quite young.

DOGWOOD. *Cornus*

White Flowering Dogwood (*C. Florida*)—Grows from 20 to 25 feet high; spreading, irregular form; flowers produced in spring before the leaves appear, about $3\frac{1}{2}$ inches in diameter, white and showy, very durable, lasting two weeks; foliage is a grayish-green, glossy and handsome, turning to a deep red in the fall; a valuable tree for ornamental planting.



American White Elm

ELM. *Ulmus*

American White Elm (*U. Americana*)—A magnificent tree growing 80 to 100 feet high, with drooping, spreading branches; one of the grandest of our native trees; makes a beautiful lawn or street tree.

Huntingdon Elm (*U. Huntingdoni*)—A very handsome tree of erect habit, rapid, vigorous growth; bark clean and smooth. One of the finest of this family.

Red or Slippery Elm (*U. Fulva*)—Not so large as the American; foliage larger and head more open; inner surface of bark used extensively for medicinal purposes.

HACKBERRY. *Celtis*

American Nettle Tree (*C. Occidentalis*)—A rare native tree with numerous slender branches which spread horizontally, and thick rough bark; apple-like foliage, but more pointed and a bright shiny green; a very desirable tree for street planting.

KENTUCKY COFFEE TREE.

Gymnocladus

A very ornamental, hardy tree of upright, rapid growth with rough bark and coarse branches; foliage of a bluish-green color; flowers white followed by long pods. The name coffee tree comes from the fact of the seeds in the pods having been used by early settlers as a substitute for coffee.



Norway Maple (See page 38)

KOELREUTERIA

Varnish Tree (*K. Paniculata*)—A small, hardy round-headed tree with fine lobed leaves and large panicles of showy-yellow flowers the latter end of July; leaves change in the fall to a fine yellow; grows to 25 to 30 feet high.

LARCH. *Larix*

American Larch (*L. Americana*)—A tall tree, forming a pyramidal head; bark reddish-brown, branches slender; leaves long and slender, of a light blue color; canes small and oval; makes a very beautiful lawn tree and is also serviceable as a wind brake.

European Larch (*L. Europea*)—A native of the Alps of the south of Europe; an elegant growing, pyramidal tree; valuable for timber.

LINDEN. *Tilia*

American Linden or Basswood (*T. Americana*)—Grows about 60 feet high, rapid growing, large size, forming a broad round-topped head; leaves broadly oval, dark green above, light green underneath; flowers are creamy-white and fragrant; a splendid street or lawn tree.



Purple Leaved Beech (See page 35)

European Linden (*T. Europea*)—A very fine pyramidal tree of large size with large leaves and fragrant flowers; the leaves change in the fall to beautiful tones of yellow and brown.

European Broad Leaved Linden (*T. var. platiphylla*)—A tree about the same size as above, but distinguished by its larger and rougher leaves and more regular growth.

Silver Leaved Linden (*T. Argentea*)—Showy, heart-shaped foliage, light green above and silvery underneath; grows about 40 feet high; its handsome form and foliage make it one of the best of our ornamental trees.

LOCUST. *Gleditschia*

Honey Locust (*G. Tricanthos*)—A rapid-growing native tree with powerful spines and delicate foliage; the greenish flowers appearing in early summer are followed by flat pods 8 to 10 inches long; used extensively for hedges.

LOCUST or ACACIA. *Robinia*

Black or Yellow Locust (*R. Pseud-acacia*)—A native tree of large size, rapid growth and valuable for timber as well as ornamental; flowers are white or yellowish, very fragrant and appear in June.

MAGNOLIA

Cucumber Tree (*M. Acuminata*)—A majestic pyramidal tree growing to a height of 90 feet with large bluish-green leaves 6 to 8 inches long; flowers yellowish-white; fruit when green resembles a cucumber.

Soulang's Magnolia (*M. Soulangeana*)—A large shrub or small tree; leaves dark green, expanding after the flowers have fallen; flowers large cup-shaped, white flushed with rosy pink and quite fragrant.



Weir's Cut Leaved Maple

MAPLE. *Acer*

Box Elder or Ash Leaved Maple (*A. Negundo*)—Large spreading tree of rapid growth, 70 feet high; foliage smaller than in other maples; very frequently planted for wind-breaks and timber; very hardy.

Norway Maple (*A. Platanoides*)—A large handsome tree, with broad, deep green foliage; has a very compact growth; attains a height of 100 feet; a valuable tree for parks, lawns or streets.

Schwedlers Maple (*A. Platanoides Schwedlerii*)—A beautiful variety with very large bronze-red leaves and young shoots of the same color; a vigorous grower and a most effective ornamental tree; grows about 50 feet high.

Silver Leaved or Soft Maple (*A. dasycarpum*)—A rapid growing tree of large size, irregular rounded form; foliage bright green above and silver beneath; a favorite street and park tree; attains about the same height or taller than the Norway.

Sugar or Hard Maple (*A. Saccharum*)—A well-known native tree, valuable both for the production of sugar and wood; very desirable as an ornamental shade tree.

Sycamore Maple (*A. Pseudo Platanus*)—A native of Europe; leaves large, deep green and smooth; bark smooth and ash gray color; rapid upright growth; a beautiful tree for street planting.

Wier's Cut Leaved Maple (*A. Wierii Laciniatum*)—A variety of the Silver-leaved and one of the most beautiful with cut or dissected foliage; rapid growth, shoots slender and drooping; ranks among the best as an attractive lawn or street tree.



Carolina Poplar (See page 39)



Mountain Ash

MOUNTAIN ASH. *Sorbus*

European Mountain Ash (*S. Aucuparia*)—A fine tree with dense and regular head; covered from mid-summer to winter with great clusters of bright scarlet berries.

Oak Leaved Mountain Ash (*S. Quercifolia*)—A hardy tree of fine pyramidal habit; foliage deeply lobed, bright green above and downy underneath; one of the finest lawn trees.

MULBERRY. *Morus*

Russian Mulberry (*M. Alba Tartarica*)—See Mulberries, page 25.

White Mulberry (*M. Alba*)—See Mulberries, page 25.

OLIVE. *Eleagnus*

Russian Olive (*E. Augustifolia*)—A very large shrub or small tree; leaves narrow and silvery-white, flowers yellow and fragrant; very hardy.

OAK. *Quercus*

Pin Oak (*Q. Palustris*)—A magnificent tree for lawn and street planting, with deep green foliage which changes to a rich scarlet and yellow in the fall; a most shapely and graceful tree.

Red Oak (*Q. Rubra*)—Makes a tree of great height, 80 to 100 feet; a native of large size and rapid growth; leaves dark dull green, turning to orange and brown in autumn; acorns very large; a beautiful specimen tree for park and street planting.

Scarlet Oak (*Q. Coccinea*)—A rapid growing pyramidal tree, especially beautiful in the fall, when the foliage changes from green to a bright scarlet; very symmetrical in outline.

PERSIMMON. *Diospyros*

American Persimmon (*D. Virginiana*)—A native variety with round top head and spreading, often pendulous branches; foliage dark green and very dense, fruit over an inch in diameter, pale orange-yellow, with a whitish bloom; delicate flower; very astringent, until full ripe or after early frosts; makes a beautiful lawn tree.

PLUM. *Prunus*

Purple Leaved Plum (*P. Pissardi*)—Tree of medium size, wood and leaves dark purple; fruit is also purple until ripened; a native of Persia; one of the most conspicuous ornamental trees.

POPLAR. *Populus*

Balm of Gilead (*P. Balsamifera Candicaris*)—A strong growing spreading native tree; esteemed for its vigor and hardiness; leaves broad and heart-shaped, green above and rusty white beneath; makes a good street tree and is perhaps the best of the poplars for shade.

Bolles Silver Poplar (*P. Alba Bolleana*)—A very compact, upright grower, with glossy leaves green above and silver underneath, one of the most desirable of the poplars.

Carolina Poplar (*P. Monilifera*)—Pyramidal in form and vigorous in growth; leaves large, glossy, pale to deep green; valuable for street planting on account of its rapid growth.

Lombardy Poplar (*P. Fastigiata*)—Attains a height of 100 to 150 feet; well-known for its erect, rapid growth and tall, spiry form; an indispensable tree for landscape gardening to break the monotony of most other trees.



Norway Poplar



Double Scarlet Thorn (See page 40)

Norway Poplar (Sudden Sawlog)

—Tree very hardy; is being planted quite extensively in many sections. Similar to Carolina Poplar in growth and appearance, but is claimed to be of more rapid growth and retains its size better as it mounts upward, and thus produces more lumber. Will thrive in most any soil or location. Valuable for street and park planting, also for screens and shelter belts.

Silver Leaved Poplar (*P. Alba* var. *Nivea*)—A tree of wonderfully rapid growth and wide, spreading habit; leaves large, glossy green above and white underneath; prefers a moist soil, but grows anywhere.

RED BUD. *Cercis*

Judas Tree or Red Bud (*C. Canadensis*)—A medium size tree with large irregular head and perfect heart-shaped leaves; derives its name Red Bud from the profusion of delicate reddish-pink blossoms with which it is covered in early spring before the foliage appears; one of the finest ornamental trees.

SALISBURIA

Maiden Hair or Ginkgo (*S. Adiantifolia*)—Very effective for lawns, foliage fern-like, yellowish-green marked with delicate, hair-like lines. The fruits which mature in the fall have a sweetish, resinous taste.

SYCAMORE. *Platanus*

American Sycamore or Plane Tree (*P. Occidentalis*)—A well-known tree, very common throughout the United States; leaves heart-shaped at base, the short lobes sharp pointed; branches are wide spreading.

Oriental Plane or European Sycamore (*P. Orientalis*)—A rapid growing, erect tree with bright green foliage; much more esteemed than the American variety as a shade tree; very desirable for parks, streets and lawns.

THORN. *Crataegus*

Double White Thorn (*Oxyacantha*, var. *alba flore pleno*)—A small tree, with spreading, spiny branches; very hardy and will thrive in any dry soil; has small double, white flowers, a very highly ornamental tree.

Double Pink Thorn (*C. Oxyacantha*; var. *rosea flore pleno*)—Same as above, but with flowers of a beautiful pink color.



Camperdown Weeping Elm

English Hawthorne (*C. Oxyacantha*)—The well-known English variety extensively used for hedges; flowers single white.

Paul's Double Scarlet (*C. Oxyacantha* var. *coccinea flore pleno*)—Flowers a bright carmine red; superior to any of its color.

TULIP TREE. *Liriodendron*

Tulip Tree (*L. Tulipifera*)—A magnificent rapid growing tree of pyramidal form attaining a height of 150 feet, with light green, glossy fiddle-shaped leaves and greenish-yellow tulip shaped flowers; also known as white wood.

WALNUT

Black—(See page 26.)

WILLOW. *Salix*

Russian Golden (*S. Vitellina aurea*)—At the present time one of the most planted of all the willows and a very important tree, both from an economical and ornamental standpoint. It makes a round topped tree of symmetrical form. One of its strongest ornamental features is the bright, clear, golden-yellow bark which offers a pleasing contrast wherever it is used. The variety which is now generally grown under this name is quite distinct from that to which it was formerly given. This type was brought from Russia by Prof. Budd, under the name of *Salix Aurea* and it is superior not only for its hardness, but for its ornamental features as well.

Laurel Leaved Willow (*S. Laurifolia*)—A fine ornamental tree with very large shining leaves.

WEeping TREES

BIRCH. *Betula*

Cut Leaved Weeping Birch (*B. Alba*, var. *pendula laciniata*)—Undoubtedly one of the most popular of all weeping or pendulous trees; tall and slender, graceful drooping branches, silvery-white bark, delicately cut foliage; makes an attractive specimen; growth vigorous.

ELM. *Ulmus*

Camperdown Weeping Elm (*U. Scabra* var. *pendula*)—This forms one of the most picturesque of the drooping trees; forms a large, umbrella-like head, spreading many feet in every direction; very rapid grower, making a growth of several feet in a season; leaves are large, dark green and glossy and cover the tree with a dense mass of verdure.

MOUNTAIN ASH. *Pyrus*

Weeping Mountain Ash (*P. Sorbus Aucuparia*, var. *pendula*)—A beautiful tree of rapid growth and decidedly pendulous and trailing habit. One of the most desirable of lawn trees.

MULBERRY. *Morus*

Iowa Weeping Mulberry—Originated in Iowa County, Iowa; similar to the Teas in habit of growth, but harder and a more vigorous grower; a valuable ornamental weeping tree.

Tea's Weeping Mulberry (*M. Alba*, var. *tartarica pendula*)—One of the most graceful and hardy weeping trees; forms a perfect um-

umbrella-shaped head with long, slender, willowy branches drooping to the ground; admirably adapted to ornamenting lawns or cemetery; the foliage is beautiful and the tree is wonderfully vigorous and healthy; will withstand the cold of the North and the heat of the South; in every way a most desirable tree.

WILLOW. *Salix*

American Weeping Willow (*S. Purpurea*, var. *pendula*)—A dwarf, slender variety; grafted 5 or 6 feet high, it makes one of the most ornamental of small weeping trees; more hardy than the *Babylonica*.

Babylonian Weeping Willow (*S. Babylonica*)—The well-known, common weeping willow; makes a large tree covered with drooping branches.

Kilmarnock Weeping Willow (*S. Caprea*, var. *pendula*)—A distinct variety having reddish shoots and large glossy foliage; grafted about five feet from the ground it makes a very desirable small lawn tree, with the branches drooping



Iowa Weeping Mulberry (See page 40)

gracefully to the ground, well suited to planting in cemetery lots or small enclosures; hardy and of vigorous growth.

Wisconsin Weeping Willow (*S. Babylonica*, var. *dolorosa*)—Of drooping habit and considered the hardiest; valuable on account of its ability to resist severe cold.

EVERGREENS

ARBOR VITAE. *Thuya*

American Arbor Vitae (*T. Occidentalis*)—A beautiful native tree commonly known as the white cedar; valuable for screens and hedges.

Golden Arbor Vitae (*T. Occidentalis*, var. *Aurea*)—Broad, bushy grower with deep golden foliage; very ornamental.

Hovey's Golden Arbor Vitae (*T. Occidentalis*, var. *Hoveyi*)—A very pretty dwarf species, of compact form, with bright golden foliage; very fine and hardy.

Parson's Arbor Vitae (*T. Occidentalis*, var. *compacta*)—Of dwarf, compact habit and deep green foliage.

Pyramidal Arbor Vitae (*T. Occidentalis*, var. *pyramidalis*)—A densely branched variety forming a perfect column; holds its shape without trimming or pruning; hardy and will succeed anywhere the American Arbor Vitae does, a very ornamental type for many kinds of planting.

Siberian Arbor Vitae (*T. Occidentalis*, var. *Siberica*)—Exceedingly hardy and keeps its color well into winter; compact and pyramidal; of great value for lawns, screens and hedges.



Cut Leaved Weeping Birch (See page 40)

FIR. *Abies*

Balsam Fir (*A. Balsamea*)—A very erect, regular pyramidal tree with dull, dark green foliage; rapid growth and very hardy.

Concolor Fir (*A. Concolor*)—A very beautiful species with yellow bark on the young branches; leaves green, arranged in double rows; equal in color and beauty to the Colorado Blue Spruce.

JUNIPER. *Juniperus*

Irish Juniper (*J. Communis*, var. *Hibernica*)—A distinct and beautiful variety of erect, dense conical outline, resembling a pillar of green.

Red Cedar (*J. Virginia*)—A well-known native tree; varies much in habit and color of foliage; very attractive in winter when the golden bronze of the young growth contrasts with the dark green of the older.

Savin Juniper (*J. Sabina*)—A dwarf, spreading shrub with trailing branches; thrives in poor soils and is valuable for rock work.

Sweedish Juniper (*J. Communis*, var. *suecica*)—A small sized handsome pyramidal tree with yellowish-green foliage; quite hardy.

PINE. *Pinus*

Austrian or Black Pine (*P. Austriaca*)—A native of Syria; tree robust, hardy and spreading; leaves long, stiff and dark green; rapid growth; very valuable for this country.



American Arbor Vitae (See page 41)



Scotch Pine

Bull Pine (*P. Ponderosa*, var. *Scopulorum*)—Forms a stout, spreading tree; a rapid grower; branches heavy and rough coated with bark; foliage dark green, the needles growing out at right angles to the wing; very hardy.

Jack Pine (*P. Divaricata*)—The most northern of all American pines; valued for its extreme hardiness and vigor; withstands long drouths and hot dry winds; of rather irregular and shrubby growth; foliage bright green, needles short and stiff.

Red Cedar—See Juniper.

Scotch Pine (*P. Sylvestrus*)—A native of Europe; a fine robust, rapid-growing tree with stout, erect shoots and silvery-green foliage; very hardy.

White Pine (*P. Strobus*)—The most ornamental of all our native pines, foliage light, delicate silvery green; will grow in the poorest of sandy soils; a long-lived tree and rapid grower.

SPRUCE. *Picea*

Black Hills Spruce (*P. Nigra*)—A beautiful tree with drooping branches and fine yew-like foliage; perfectly hardy.

Colorado Blue Spruce (*P. Pungens*)—One of the most beautiful and hardy of all the spruces; in form and habit similar to the White Spruce; foliage a rich light bluish-green.

Douglas' Spruce (*A. Douglasii*)—A native of Colorado; large, conical form; branches spreading, horizontal; leaves light green above, silvery white below.

from all other trees; a handsome lawn tree and makes a very ornamental hedge.

Koster's Blue Spruce (*P. Pungens*, var. *Kosteriana*)—A type of the Colorado Blue Spruce;



Block of Black Hills Spruce

Englemann's Spruce (*P. Engelmanni*)—Resembles the Colorado Blue Spruce in general effect; foliage coloring from bluish-green to steel blue; needles are not as long and are more soft and flexible.

it is the highest colored and most striking of all the Evergreens for lawn planting; the foliage is a rich and beautiful silvery-blue; very hardy.

White Spruce (*P. Alba*)—A native tree of medium size and pyramidal form; bark light colored and foliage silvery-gray; very hardy.



Irish Juniper (See page 42)

Hemlock Spruce (*A. Canadensis*)—A graceful and beautiful native tree, with drooping branches and delicate dark foliage, distinct

Ornamental Shrubs

ACACIA. Robinia Flowering Locust

Rose Acacia (*R. Hispida*)—A native species of spreading irregular habit; long clusters of pea-shaped, rose-colored flowers in June and at intervals through the season; foliage a light green.

Rose Acacia (*R. Neo-Mexicana*)—Grows five to six feet high; branches covered with stiff prickles; flowers rose-color in drooping racemes.

ALTHEA. Hibiscus Syriacus

Rose of Sharon—One of the most showy and beautiful of shrubs; flowers large, double and many brilliant colors; blooms freely in August and September, when few other trees and shrubs are in blossom.

Ardens—Violet color; petals quilled; very large and double.

Boule de Feu—Violet red color; very double; blooms late.

Coelestis—Single; flowers blue.

Duchess de Brabant—Reddish-lilac color, very large and double.

Elegantissima—Double white.

Rubra Flore Pleno—Double red.

Jean de Arc—One of the best; pure white and double.

Lady Stanley—Very double; white with beautiful blush.

Pulcherima—Large, double, rosy-white.

Totus Albus—Single, pure white, very fine.

Variegated Leaved—Foliage finely marked with light yellow; flowers purple and double.

ALMOND. *Amygdalus*

Pink Double Flowered Almond (*A. Flore pleno Rosea*)—A vigorous, beautiful tree, covered in May with rose-colored blossoms like small roses; hardy.

White Double Flowered Almond (*A. Flore pleno Alba*)—Same as above except blossoms are pure and white.

AZALEA

A. Mollis—A hardy species from Japan, and one of the most valuable flowering shrubs; flowers large and showy yellow and different shades of red.

Ghent Azalea (*A. Pontica*)—Grows three to four feet high, with small hairy leaves and yellow, red and orange flowers.

BARBERRY. *Berberis*

Canadian Barberry (*B. Canadensis*)—A native variety of shrub or small tree with handsome foliage, and yellow flowers in May, succeeded by bright colored fruit; very ornamental in the fall and winter.

European Barberry (*B. Vulgaris*)—A handsome shrub with yellow flowers in May or June; followed with orange-scarlet fruit.



Rose of Sharon (See page 43)

Japanese Barberry (*B. Thunbergii*)—From Japan; of dwarf habit, small foliage, changing to a beautiful coppery red in the fall; is very ornamental when used as a hedge.

Purple Leaved Barberry (*B. Vulgaris*, var. *purpurea*)—Grows three to five feet high; foliage and fruit violet purple; very effective in groups or masses; yellow blossoms.

BUCKTHORN. *Rhamnus*

R. Cartharticus—A very fine vigorous, hardy shrub of European origin with dark green foliage, white flowers, and small black fruit; a popular hedge plant.

CALYCANTHUS. Sweet Scented Shrub

C. Floridus—A native species with double purple flowers, very fragrant and the wood is also fragrant; foliage rich dark green; blooms in June and at intervals afterward.

CARAGANA. Siberian Pea

Siberian Pea Tree (*C. Arborescens*)—A shrub or low tree with pea-shaped yellow flowers; hardy and useful for massing.



Azalea

CEPHALANTHUS

Button Bush (*C. Occidentalis*)—A tall-growing native shrub with globe-shaped heads of white flowers in July.

COLUTEA

Bladder Senna (*C. Arborescens*)—A large shrub with small, delicate foliage, and yellow pea blossom shaped flowers in June, followed by reddish pods.

CURRENT. Ribes

Crimson Flowered Currant (*R. Sanguineum*)—A native variety with deep red flowers, blooms early in the spring.

Crاندall's—A seedling from the West; blooms profusely; bright yellow flowers; fruit of a red black color.

Gordon's Flowering Currant (*R. Gordonianum*)—Very hardy and profuse blooming; flowers are beautiful crimson and yellow in pendent bunches; blooms in May.

Yellow Flowered Currant (*R. Aureum*)—A native species with beautiful shining foliage and yellow flowers.

DESMODIUM

Sweet Pea Shrub (*D. Penduliflorum*)—A low growing shrub having rose-purple pea-shaped blossoms in great profusion; blooms in September and continues until late October; tops die down after frost, but come up again in the spring; a valuable shrub for massing or borders.

DEUTZIA

Golden Leaved Deutzia (*D. Gracilis*, var. *aurea*)—Foliage a beautiful yellow; flowers white and more showy than the slender branches.



Deutzia

Double Flowered Deutzia (*D. Crenata flore pleno*)—A very hardy shrub with luxuriant foliage and a profusion of double white flowers tinged with rose, produced in late June on long racemes; one of the most desirable in cultivation.



Barberry—Thunbergii (See page 44)

Lemoine (*D. Lemoinei*)—Flowers pure white; shrub dwarf and free flowering; excellent for forcing.

Pride of Rochester—Produces large double white flowers, tinged with rose; vigorous grower, profuse bloomer and one of the earliest to bloom.

Slender Branched Deutzia (*D. Gracilis*)—Of dwarf habit; flowers pure white; one of the first to bloom; fine for pot culture and winter blooming.

Variegated Leaved Dogwood (*C. Elegantissima Variegata*)—Foliage a pale yellow, turning to a rose color in the fall; branches blood red.

ELEAGNUS

Russian Olive (*E. Augustifolia*)—See page 38.

Japanese Silver Thorn (*E. Longipes*)—A shrub about six feet high; flowers yellowish-white and fragrant; fruit very ornamental with an agreeable slightly acid flavor; one of the most desirable for lawns.

ELDER. *Sambucus*

Common Elder (*S. Canadensis*)—A large showy shrub, very ornamental in foliage, fruit and flowers and blossoming in June; flowers white, borne in large panicles; fruit reddish-purple berries in the fall.

Cut Leaved Elder (*S. Nigra* var. *Lociniata*)—One of the best cut leaved shrubs; a valuable variety with elegantly divided leaves.

Golden Elder (*S. Nigra*, var. *aurea*)—A handsome variety with golden-yellow foliage.

Variegated Leaved Elder (*S. Nigra*, var. *variegata*)—The foliage is mottled with yellow and white; one of the best of the variegated leaved.

EXOCHORDA. Pearl Bush

Pearl Bush (*F. Grandiflora*)—A fine shrub, producing large white flowers in May; one of the finest in its season.

FORSYTHIA. Golden Bell

Fortune's Forsythia (*F. Fortunei*)—A beautiful shrub of medium size; flowers are a bright yellow and appear before the leaves; foliage deep green; the best of the early flowering shrubs.

F. Intermedia—Flowers bright golden yellow; foliage glossy green; resembles the *Viridissima*, but hardier; a valuable variety.

F. Viridissima—A fine hardy variety; leaves and bark deep green; flowers deep yellow, early bloomer.

Weeping Forsythia (*F. Suspensa*)—Resembles the Fortune in its flowers, but the growth is somewhat drooping.

FRINGE TREES

See Purple and White Fringe—Pages 48, 51.

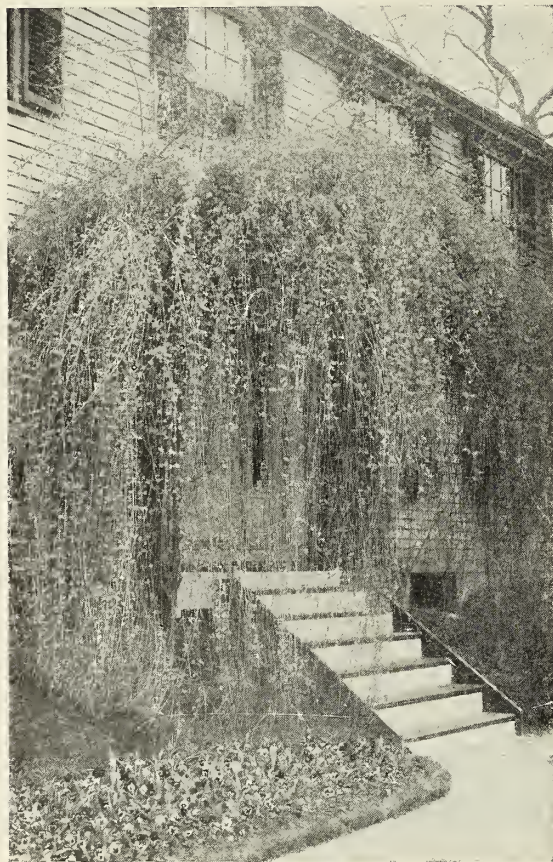
HALESIA. Silver Bell

Silver Bell Tree (*H. Tetraptera*)—A beautiful large shrub forming a low, wide head, profusely covered with a mass of small snowy white flowers; blooms about the middle of May; foliage dark green; a valuable acquisition to any lawn.

HONEYSUCKLE BUSH. *Lonicera*

Fragrant Bush Honeysuckle (*L. Fragrantissima*)—A spreading shrub with deep green foliage and fragrant small flowers which appear before the leaves; bushes are erect in growth.

Pink Tartarian Honeysuckle (*L. Tartarica rosea*)—Pink flowers that make a lovely contrast with the foliage; planted with the *Grandiflora*, the two make a beautiful display.



Forsythia Suspensa

DOGWOOD. *Cornus*

European Red Dogwood (*C. Sanguinea*)—A valuable shrub for grouping and massing; very ornamental in winter when the bark is blood red; foliage variegated in summer.

Red Osier Dogwood (*S. Stolonifera*)—Produces white flowers in early June; in winter young shoots are a blood red color.

Siberian Dogwood—Free growing, 6 to 10 feet tall, and very hardy; forms a small, handsome tree in some situations; its clusters of small, white flowers in early summer are very dainty, and its bark is a showy, dark red in winter. All the Siberian Dogwoods bear in early fall a profusion of whitish blue berries, making them distinctly ornamental after the flowers have gone.

Pink Flowered Honeysuckle (*L. T. var. grandiflora*)—Produces large, bright red flowers striped with white, blooms in June.

Red Tartarian Honeysuckle (*L. T. var. rubra*)—Blossoms early in the spring; flowers a beautiful bright red.

White Tartarian Honeysuckle (*L. T. var. Alba*)—Produces creamy white, fragrant flowers in May and June; forms a high bush.

HYDRANGEA

Hardy Hydrangea (*H. Paniculata grandiflora*)—A beautiful, tall shrub with leaves of bright, shiny green; flowers borne in huge panicles from 8 to 12 inches long, light pink, changing to brown later in the fall; blooms in August and September; can be grown in tree form successfully and makes a very desirable lawn ornament.

Japanese or Garden Hydrangea (*H. Hortensis, var. Thos. Hogg*)—One of the hardiest; well adapted to pot culture and outdoor cultivation; flowers pure white; a profuse bloomer.

White Flowered Hydrangea (*H. Arborescens Alba Grandiflora*)—Resembles the *Paniculata* in general form and shape of flowers; borne



Hydrangea

in panicles of pyramidal shape from 5 to 8 inches in diameter and 8 to 10 inches long; changing to a greenish-white; one of the best.

JAPAN QUINCE. *Cydonia*

Scarlet Japan Quince (*C. Japonica*)—One of the best flowering shrubs; flowers a bright scarlet crimson, borne in great profusion in early spring; foliage retains its color of bright glossy green the entire summer; hardy; make good hedge plants.

KERRIA. *Corchorus*

Globe Flower (*C. Japonica*)—A slender green branched shrub, 5 to 6 feet high, with globe-shaped yellow flowers from July to October; very ornamental.

LILAC. *Syringa*

The lilacs are well-known, beautiful shrubs, indispensable in every collection.

Chinese Tree Lilac (*Pekinensis*)—Foliage smooth, shining green; spikes of creamy white flowers; blooms late; makes a large shrub.

Chinese Weeping Lilac (*Pekinensis Pendula*)—Same as the above of graceful, drooping habit.

Hungarian Lilac (*S. Josikea*)—A fine distinct species of tree-like growth, dark shining leaves and purple flowers in June. A very desirable variety.

Japan Tree Lilac (*S. Japonica*)—A species from Japan, becoming a good sized tree; foliage dark glossy green; flowers creamy white; a late bloomer.



Purple Lilac

Persian Lilac (*S. Persica*)—Grows 4 to 6 feet high, foliage small and flowers a bright purple.

Persian White Lilac (*S. Persica*, var. *Alba*)—Delicate white, fragrant flowers, shaded with purple.

Persian Cut Leaved Lilac (*S. Persica Laciniata*)—Erect, growing with slender branches and foliage deeply cut; flowers a light purple; late bloomer.

Persian Red Lilac (*S. Rothomagensis*, var. *rubra*)—Reddish flowers borne in panicles of great size and very abundant.

Purple Lilac (*S. Vulgaris*)—The well-known purple variety; always a standard sort.

Red Lilac (*S. Vulgaris rubra*)—Flowers a reddish-violet color.

White Lilac (*S. Vulgaris alba*)—Too well-known to need description; flowers white and fragrant.

SINGLE LILACS

Charles X—A strong rapid growing variety, large shining leaves; flowers reddish purple.

Marie LeGraye—Large panicles of white flowers; the finest white lilac.

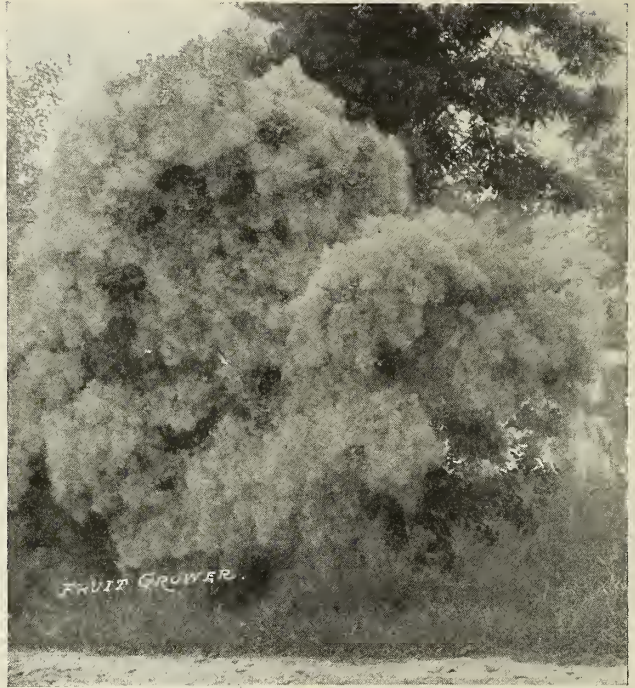
Rubra de Marlay—Flowers very dark lilac.

Souvenir de Ludwig Spaeth—Flowers a dark purple borne in large panicles; the best of the dark varieties.

DOUBLE LILACS

Alphonse Lavalle—Flowers a bluish-lilac.

Belle de Nancy—Flowers pink with a white center.



Purple Fringe or Smoke Tree

MAHONIA. Ashberry

Holly Leaved Mahonia (*M. Aquifolium*)—A native shrub, very handsome, with purplish, shining prickly leaves and bright yellow flowers in May, followed by bluish berries; very ornamental.

PLUM. Prunus

Double Flowered Plum (*P. Triloba*)—A very desirable addition to the hardy shrubs; flowers double and delicate pink, and thickly set on long, slender branches; blooms in May.

Purple Leaved Plum (*P. Pissardi*)—See ornamental trees on page 39.



California Privet (See page 49)

Mme. Abel Chatenay—Flowers white, borne in compact panicles.

Mme. Casimir Perier—Flowers white, borne in large, graceful panicles.

President Grevy—Panicles large, pale blue and very double.

PURPLE FRINGE or SMOKE TREE. Rhus

R. Cotinus—A valuable ornamental shrub; has curious fringe or hairlike flowers that cover the whole tree, giving the appearance of mist or smoke; wide spreading habit which requires some room to grow to the best advantage.

PRIVET. *Ligustrum*

Amoor River Privet (*L. Amurense*)—A valuable ornamental shrub for hedges and borders; very hardy; foliage glossy green and holds its color almost the entire year; will stand shearing to any extent.

California Privet (*L. Ovalifolium*)—The well-known variety; vigorous and hardy; deep glossy green; useful for hedges and borders.

English Privet (*L. Vulgaris*)—Foliage narrow; showy white flowers in June, followed by fruit.

Chinese Privet (*L. Ibotia*)—A native of China and Japan; foliage long and shining; flowers large, white and fragrant; a distinct sort, valuable for its flowers and foliage.

Regel's Privet (*L. Regellanum*)—A dense low shrub with spreading branches, pendent at the end; a very graceful bush for hedges; needs very little trimming.

Purple Fringe (*R. Cotinus*)—See page 48.

SNOWBALL. *Viburnum*

Common Snowball (*V. Opulus Sterilis*)—Grows 6 to 8 feet high, the old fashioned snowball; its large globular clusters of pure white flowers are produced in May and June and make a very attractive appearance.

High Bush Cranberry (*V. Opulus*)—It has handsome broad foliage of a shining dark green color, changing to rich coppery tints; flowers are white and very conspicuous; the fruit is a brilliant scarlet and hangs in long pendent clusters nearly all winter. A very desirable ornament to any lawn.

Japan Snowball (*V. Plicatum*)—Foliage a handsome olive-green; flowers are larger and more white than the Common Snowball; borne in dense heads; very ornamental.



Snowball

SNOWBERRY *Symphoricarpus*

Coral Berry (*S. Vulgaris*)—A slender branched upright shrub, valuable for planting in shady places, as the foliage is very persistent; the fruit is a purplish red and hangs on well into winter; flowers small and rose colored.

Snowberry (*S. Racemosus*) — Same as the above except the berries are a pure, snow white; flowers rose colored, but larger.

SUMACH. *Rhus*

Cut Leaved Staghorn Sumach (*R. Typhina lacineata*) — A showy, broad-headed shrub with large, long, deeply cut foliage, light green in color, changing to shades of red and yellow in the fall; the new growth is clothed with a peculiar down, giving an appearance of the growing horn of a deer; the bark below is a rich orange color.



Spirea Van Houttei (See page 50)

Cut Leaved Sumach (*R. Glabra*, var. *laciniata*)—A variety of the Smooth Sumach with deeply cut, fern-like foliage.

Smooth Sumach (*R. Glabra*)—A shrub 8 feet high with handsome green foliage, changing to beautiful autumn tints; showy spike of crimson fruit.

SPIREA. Meadow Sweet

S. Arguta—Of dwarf habit, spreading head; flowers clear white; the best of the very early flowering white varieties; blooms in May.

Ash Leaved (*S. Sorbifolia*)—A vigorous grower with foliage similar to the Mountain Ash and long spikes of beautiful white flowers; blooms in July.

Billard's Spirea (*S. Billardi*)—Flowers are rose colored; blooms nearly all summer.

Bridal Wreath (*S. Prunifolia flore pleno*)—Foliage a dark shining green, changing to autumn tints in the fall; flowers double, pure white and are borne the entire length of the twigs; one of the most popular varieties.

S. Bumalda—A handsome variety from Japan; dwarf habit and vigorous growth; foliage narrow; flowers rose colored and borne in great profusion; blooms a long time.

Anthony Waterer—A fine dwarf Spirea with dark crimson flowers.

Douglas' Spirea (*S. Douglasi*)—A beautiful variety with spikes of deep rose colored flowers in July and August.

Fortune's Dwarf White Spirea (*S. callosa alba*)—A white flowering variety of dwarf, symmetrical form; keeps in flower all summer; a valuable sort.



Syringa

Golden Leaved Nine Bark (*S. Opulifolia*, var. *aurea*)—A beautiful variety with golden-yellow foliage and double white flowers in June.

Nine Bark (*S. Opulifolia*)—One of the most vigorous growers; foliage light green; flowers white and produced in great profusion.

Thunberg's Spirea (*S. Thunbergii*)—Dwarf habit and rounded graceful form; branches slender and drooping; flowers pure white and borne the entire length of the twigs; foliage narrow and long, turning to orange scarlet in the fall.

Van Houttei Spirea (*S. Van Houttei*)—This is undoubtedly the most popular of all the varieties; foliage a rich green, changing to beautiful tints in the fall; in blooming season the bush is a perfect mass of pure white flowers, the branches bending to the ground; an indispensable ornament for lawns and hedges.

SYRINGA or MOCK ORANGE. Philadelphus

Garland Syringa (*P. Coronarius*)—A well-known shrub with pure white, very fragrant flowers; one of the first to bloom.



White Fringe Tree (See page 51)

Golden Leaved Syringa (*P. Coronarius*, var. *Aureus*)—A handsome variety with golden-yellow foliage; keeps its color the entire season; is splendid for grouping with other varieties for pleasing effects.

Gordon's Syringa (*P. Gordonianus*)—A vigorous grower and profuse bloomer; flower white, fragrant and a late bloomer.

Large Flowered Syringa (*P. Grandiflorus*)—Has very large, showy flowers, somewhat fragrant; bark reddish; a rapid grower.

Lemoine's Syringa (*P. Lemoinei*)—A graceful shrub with very rich foliage and large, pure white fragrant flowers in June.

WHITE FRINGE. *Chionanthus*

White Fringe or Fringe Tree (*C. Virginica*)—A desirable ornamental shrub of easy cultivation; dark green foliage; flowers pure white; having narrow, fringe-like petals; blooms in May and June.

WEIGELIA. *Diervilla*

The Weigelias are shrubs of erect habit while young, but gradually spread and droop as they acquire age; flowers are large, trumpet-shaped, of all shades and colors; very effective for grouping and borders; blossoms are produced in June and July.



Weigelia

TAMARIX

T. Africana—A beautiful shrub with small leaves, similar to the Juniper; flowers are pink, small and delicate, borne on long spikes; blooms in May.

T. Amurensis—Growth is slender and graceful, with silvery foliage; pink flowers borne on short spikes on the young growth.

T. Tetrandra Purpurea—A tall shrub with reddish-brown bark and slender, spreading branches; purplish pink flowers.

D. Candida—Flowers pure white, produced in June and continue to bloom nearly all summer.

D. Eva Rathke—Flowers a brilliant crimson; a beautiful, clear, distinct shade.

D. Floribunda—A fine variety, flowers a dark red and a profuse bloomer.

D. Rosea—An elegant variety with fine rose colored flowers appearing in June.

D. Nana Variegata—Of dwarf habit and clearly defined silvery-variegated leaves; flowers rose colored.

D. Van Houttei—Flowers are a rich shade of carmine and are produced profusely.

HARDY VINES

AKEBIA

Akebia Quinata—A Japanese variety of climbing shrub with large leaves and white, purple centered flowers.

AMPELOPSIS

American Ivy or Virginia Creeper (*A. quinquefolia*)—One of the finest vines for covering walls, verandas or trunks of trees; foliage green, turning to a rich crimson in autumn; a rapid grower and quickly fastens to anything it touches.

Boston Ivy (*Veitchii*)—Leaves smaller than the American; forms a dense sheet of green as leaves overlap each other; is a little difficult to start, but when once established requires no further care; foliage changes to a crimson scarlet in the fall, very valuable for covering brick or stone structures, rockeries, walls, etc.

Engelman's Ivy or Woodbine (*A. quinquefolia*, var. *Engelmanni*)—A type of *quinquefolia*, which has long been desired. It has shorter joints and smaller and thicker foliage. It is better equipped with tendrils, by which it will climb walls of stone or brick as closely as the *Veitchii* (Boston Ivy). It should be planted in the central and northwestern states, in place of the *Veitchii*, as it is perfectly hardy, withstanding heat and cold much better.

ARISTOLOCHIA

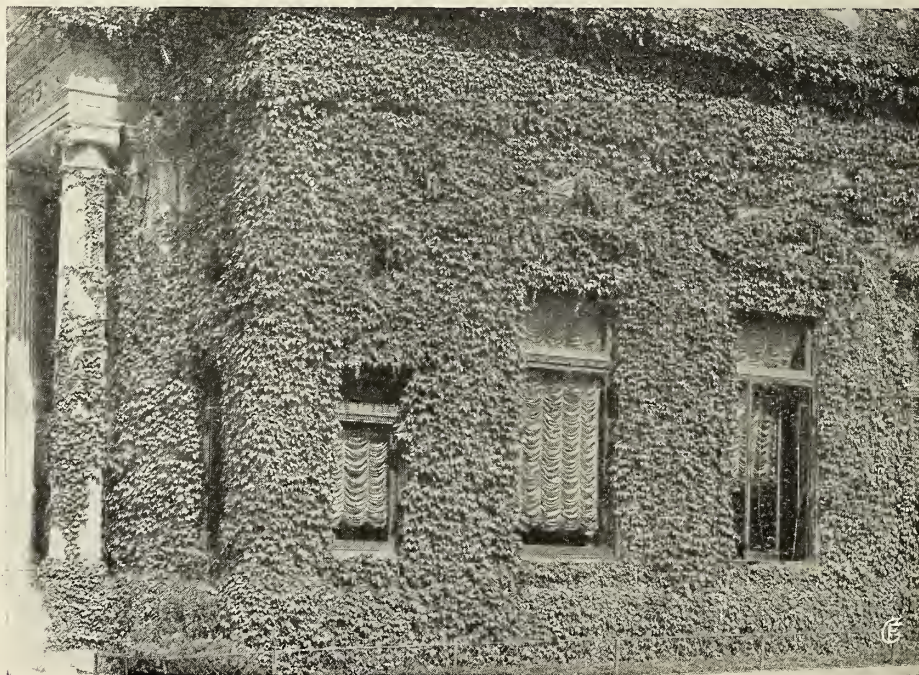
Dutchman's Pipe—A native species of climbing habit and rapid growth, light green foliage, and pipe-shaped yellowish brown flowers.

BIGNONIA. Tecoma

Trumpet Creeper (*B. Radicans*)—A hardy climbing plant with large trumpet-shaped scarlet flowers appearing in August.



Wistaria (See page 54)



Engelman's Ivy

Large Flowered Trumpet Creeper (*B. Radicans*, var. *Grandiflora*)—A beautiful variety with very large flowers, salmon colored, yellow center and striped with red.

CELASTRUS. Bitter Sweet

Climbing Bitter Sweet (*C. Scandens*)—A native climber with fine large leaves, yellow flowers and clusters of capsuled orange fruit; a rapid grower.



Clematis Jackmanni

CINNAMON VINE. Dioscorea

Chinese Cinnamon Vine (*D. Batatas*)—A beautiful, hardy, very fragrant, immensely rapid growing vine; requires no attention and will continue to grow for years; one of the most valuable.

CLEMATIS. Virgin's Bower

A beautiful class of hardy climbers, many of the varieties have flowers 5 to 6 inches in diameter. They are very valuable for training around and over pillars, verandas, fences, rock work, etc.

Large Flowering Varieties

Duchess of Edinburgh—(Fine, large, double white flowers; blooms freely.

Jackmanni—Immense flowers of an intense violet-purple color; bloom continually all summer.

Henryi—Flowers creamy-white and very large. A free bloomer.

Madam Edouard Andre—Flowers are a beautiful shade of crimson; a free bloomer.

Ramona—A vigorous grower and perpetual bloomer; flowers a deep rich lavender.

Small Flowering Varieties

Coccinea—Flowers thick, bell-shaped, of a bright coral-red color; blooms profusely.

Crispa—A slender dwarf variety with purplish flowers, bell-shaped, rather fragrant.

Flammula—Flowers small, white and sweet-scented; needs plenty of sun.

Paniculata—Probably the most popular of the small flowering sorts; vine is a rapid grower with glossy, green foliage; in September the flowers appear in a perfect mass of white, giving the appearance of a bank of snow; the fragrance is most delicious and penetrating.

Virginiana (American White Clematis)—Produces immense quantities of small white flowers in August; a very rapid climber.

Viticella—A well-known variety; produces a profusion of medium sized flowers of a bright wine-red color from June to August.

ENGLISH IVY. Hedra

The old Evergreen Ivy. Should be planted on the north side of walls or buildings to protect from the sun in winter.

HONEYSUCKLE. Lonicera

Chinese Twining Honeysuckle (*L. Japonica*)—A well-known vine, holding its foliage nearly all winter; blooms in July and September; very fragrant. Also known as the Evergreen Honeysuckle.

Hall's Japan Honeysuckle (*L. Hallena*)—A strong, vigorous vine with pure white flowers, changing to yellow; foliage remains green well into winter; very fragrant and covered with flowers almost the entire season; one of the best bloomers.

Japan Golden Leaved Honeysuckle (*L. Aurea reliculata*)—A handsome variety, with the foliage beautifully netted or variegated with yellow.

Monthly Fragrant Honeysuckle (*L. Periclymenum*, var. *Belgica*)—Blooms all summer; flowers red and yellow and very fragrant.

Scarlet Trumpet Honeysuckle (*L. Semper virans*)—One of the handsomest in cultivation; a strong, rapid grower; flowers a bright scarlet, not much odor.

Yellow Trumpet Honeysuckle (*L. Flava*)—A strong native vine with brightest orange-yellow trumpet-shaped flowers.

MADERIA VINE

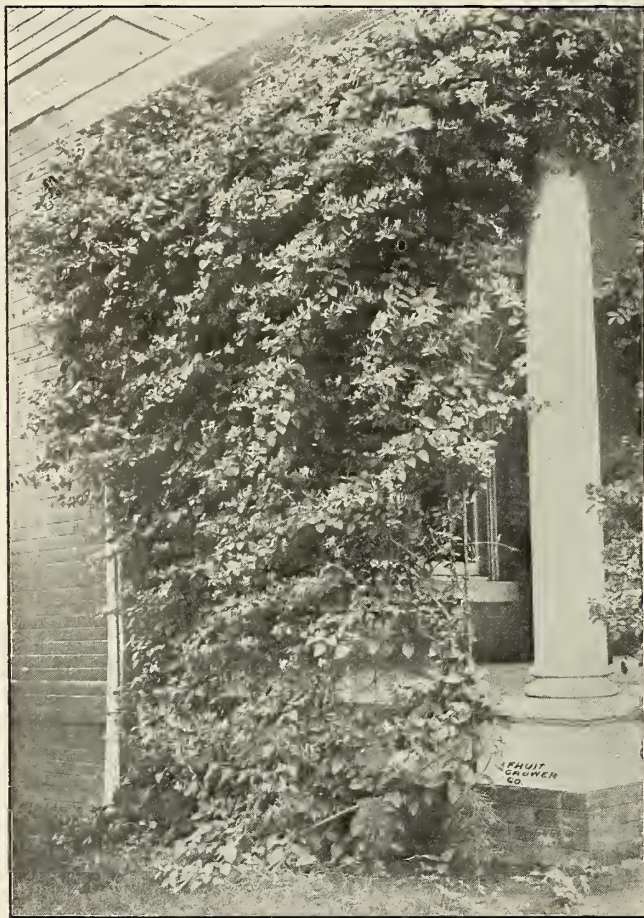
Maderia Vine—A rapid climbing plant, with thick, glossy green foliage and fine white, fragrant flowers.

MATRIMONY VINE. *Lycium*

Chinese Matrimony Vine (*L. Sinensis*)—A creeping or trailing vine; foliage a grayish-green; flowers appear in June and continue blooming until September; color varies from pink to purple; fruits are a bright crimson and make a beautiful contrast with the green foliage; valuable for trellises and fences.

SILK VINE. *Periploca*

Silk Vine (*P. Graeca*)—A beautiful, rapid climber; splendid for training around pillars, trees or other tall supports; grows to 30 or 40 feet; foliage a smooth, glossy green and very showy; flowers a purplish brown, borne in clusters.



Hall's Japan Honeysuckle (See page 53)

WISTARIA

American Purple Wistaria (*W. Magnifica*)—Flowers are borne in dense, drooping clusters of a pale blue color; vine vigorous, hardy and a rapid grower.

Chinese Purple Wistaria (*W. Sinensis*)—One of the best of the Wistarias; rapid growing and elegant, attaining 15 to 20 feet in a season; flowers a pale-blue, borne in long pendulous clusters in May and June.

Chinese White Wistaria (*W. Sinensis*, var. *Alba*)

—Same as the Chinese Purple except the flowers are pure white; very beautiful variety.

Evergreen Shrubs**BOX. *Boxus***

Dwarf Box (*Buxus*, var. *Suffruticosa*)—This variety is used extensively for low borders and is very hardy; can be grown in tubs or large pots for porch or other decoration; a slow grower, but lasts for years.

RHODODENDRON. *Rosebay*

The Rhododendrons are magnificent Evergreen Shrubs, producing beautiful masses of flowers in various colors. Should not be planted in soil containing limestone or heavy clay, as they will not succeed; where this exists, beds of especially prepared soil should be made. We can furnish the leading hardy varieties in both grafted and seedling stock.

Deciduous Hedge**BARBERRY. *Berberis***

Japanese Barberry (*B. Thunbergii*)

—A low, spreading bush, with small branches covered with small sharp thorns and in spring with small yellow flowers, succeeded by bright scarlet berries; foliage changes in the autumn to shades of scarlet and gold; makes a dense, thick hedge.

HONEY LOCUST.***Gleditschia***

Three Thorned Honey Locust (*G. Tracanthos*)—A rapid growing

native tree with strong spines and delicate foliage; very useful for hedges.

OSAGE ORANGE.***Machura***

Osage Orange (*M. Aurantiaca*)—A native tree of medium size and spreading habit; leaves bright shining green, broad and sharp pointed; the fruit resembles an orange in size and color.

JAPAN QUINCE.***Pyrus Japonica***

Scarlet Japan Quince (*Japonica*, var. *rubra*)—A beautiful flowering shrub, suitable for hedges, thorny enough to form a good defense; flowers a bright scarlet-crimson, in great profusion in the early spring.

Altheas Privet Roses**Russian Olive Spireas****Tartarian Honeysuckle**

(For descriptions of above see index for pages.)

ROSES

Among all the flowering shrubs that make for beauty, grace and ornamentation, there is none that can compare with the rose. The wide range of color, shape and size of the blooms and the diversity and character of the foliage gives it a wider range for decoration than any other single group of plants. When added to these qualifications are ease of culture, quick and ample response in blossoms, it is not to be wondered that the rose has been aptly termed the "Queen of Flowers." In nearly all collections of flowering and ornamental shrubs it occupies first place.



CULTURAL DIRECTIONS

Roses thrive best in a clay loam enriched with well-rotted manure. They should also have an open, airy situation unshaded by trees or buildings wherever possible. Dig up the soil thoroughly to a depth of 12 or 15 inches. Soak the beds occasionally with weak manure water.

HARDY ROSES

Roses delight in an open, airy situation, unshaded by trees and buildings. Always plant in solid beds and each class by itself. Hardy roses may be planted in the fall or spring, but for this latitude we recommend spring planting. Dormant plants set in the spring should be planted early, before growth is started. No plants suffer more by being planted late than does the rose.

As roses are raised mostly for their flowers, it is necessary to give that culture to the plant best adapted to produce this result. A very rich soil is of the first importance and it must be made so by thoroughly working into it plenty of old composted stable manure in which leaf mold has been decomposed.

All roses should be cut back closely at the time of planting. For Hybrid Perpetuals remove at least one-half of the previous year's growth annually in the spring. In the ever-blooming class two-thirds of the previous year's growth. Strong growing varieties require less pruning back than weak ones.

As soon as severe freezing weather sets in, raise the earth around the plant 3 to 4 inches, with leaves, straw or mellow soil.

Insects and Diseases—It is very important to keep your plants healthy and vigorous and free from diseases and insects. If troubled with green fly, spray vigorously, covering thoroughly every part of the foliage with sulpho-tobacco, soap or kerosene emulsion, made by mixing two parts of kerosene with one part of sour milk. Dilute with twenty parts of soft water. Bordeaux mixture is one of the best preventives from mildew and black spots, which are fungous diseases usually caused by continuous wet weather. By careful attention the diseases and insects may be kept down and plants will reward you with their beautiful blooms and foliage.

HYBRID PERPETUALS

Alfred Colomb—Brilliant carmine-crimson; very large, full and globular shaped; very fragrant and a superb rose.

Anne de Diesbach—Beautiful shade of carmine; very large and fragrant; quite hardy and a good forcing rose.

Baron de Bonstetten—Rich, velvety maroon, large and full; a splendid sort.

Baroness Rothschild—Light pink; a fine show rose, but without much fragrance; hardy and a late bloomer.

Captain Hayward—Very large, bright carmine-crimson; vigorous and free flowering.

Clio—One of the best; large, fine, globular form, flesh color, shading to rose in center; very vigorous.

Coquette des Alps—White, tinged with carmine; very fine; a free bloomer.

Coquette des Blanches—A pure white rose, very beautiful; one of the best of the white sorts.

Eugene Furst—Velvety crimson, shading to a deeper crimson; large, full and good shape; fragrant and beautiful.

Francois Levet—A splendid rose; cherry-red; medium size, well formed; vigorous and a free bloomer.

Frau Karl Druschki—Very large, perfect form and snow white; a vigorous grower and a free bloomer.



Frau Karl Druschki

General Jacqueminot—One of the most popular of the red roses; brilliant crimson, large and very effective, very fragrant and one of the hardiest.

General Washington—Large, rather flat in shape, bright red with crimson shading; very free bloomer.

Gloire de Lyonnaise—A grand rose; a beautiful shade of pale salmon-yellow, sometimes passing to creamy-white; very fragrant.

Gloire de Margottin—Brilliant scarlet; large semi-double, long bud; vigorous, fragrant and a free bloomer.

John Hopper—Bright rose with carmine center; large and full; very free bloomer and a standard rose.

Jubilee—A splendid large flowering variety of intense color, bright maroon-crimson, often almost a black-red; very showy; fragrance very lasting.

Jules Margottin—Bright cherry-red; large, full and very fragrant.

Louis Van Houtte—Red, shaded crimson, very vivid; large and fine form; fragrant; one of the best.

Mabel Morrison—White tinged with blush; a very valuable white rose.

Magna Charta—Extra large and full, bright rosy-pink; a profuse bloomer and very hardy.

Madame Gabriel Luizet—Rich, soft pink with deep flesh colored center; large, full and sweet.

Mme. Charles Wood—Very bright rich cherry-red; early; profuse bloomer.

Marchioness of Londonderry—Extra large ivory white; free flowering, very vigorous and hardy, delightfully fragrant; one of the best white sorts.

Margaret Dickson—Beautiful form, white with pale flesh center; petals very large; fragrant.



General Jacqueminot

Marie Bauman—Brilliant carmine-crimson, large, full and very fragrant; extra fine.

Marshall P. Wilder—Extra large, full deep red; a free bloomer and very handsome.

Mrs. John Laing—Soft pink, beautiful form, exceedingly fragrant and very free flowering.

Mrs. R. G. Sherman-Crawford—Deep, rosy pink, very double and full; vigorous and a free bloomer.

Paul Neyron—Said to be the largest rose in cultivation; bright, clear pink, very fragrant, hardy and a strong grower.

Prince Camille de Rohan—Very dark, velvety crimson, almost black, large and full; a beautiful sort.

Soliel d'Or (Sun of Gold)—A strong, hardy rose; large, full and double; golden orange-yellow tinged with red and rosy-pink; a magnificent rose.

Silver Queen—Lovely silver-rose, passing to delicate rosy-pink; delightfully fragrant and a free bloomer.

Tom Wood—Very large, bright cherry-red with shell-shaped petals.

Ulrich Brunner—Rich crimson-scarlet, highly perfumed, vigorous and hardy; a very desirable sort.



Marshall P. Wilder

Vick's Caprice—A fine striped rose of great beauty; full, double and finely formed; deep clear pink, striped with white; hardy and a good bloomer.

Victor Verdier (Climbing)—Bright rose with carmine center; a free bloomer but not fragrant.

CLIMBING ROSES

Baltimore Belle—A rapid growing, dark leaved Prairie Rose; blooms in large clusters of pale blush and white flowers late in the season.

Empress of China—A hardy, rapid growing rose of twining habit; flowers are soft, rich red, shading to cherry-pink; the vines have few thorns.

Multiflora Japonica—Single white; fragrant; very pretty.

Prairie Queen—A rapid climber; flowers are very large; a bright rosy-red, changing lighter as the flowers open; strong and vigorous.

Ruby Queen—A great climber; perfectly hardy; flowers produced in enormous quantities; color rich ruby-red, with clear white center.

Russell's Cottage—A beautiful climber with flowers ranging in color from pink to deep crimson; full double and borne in large clusters.

Setigera or Prairie Rose—A climber that makes a beautiful display with its large single flowers of a deep rose color.

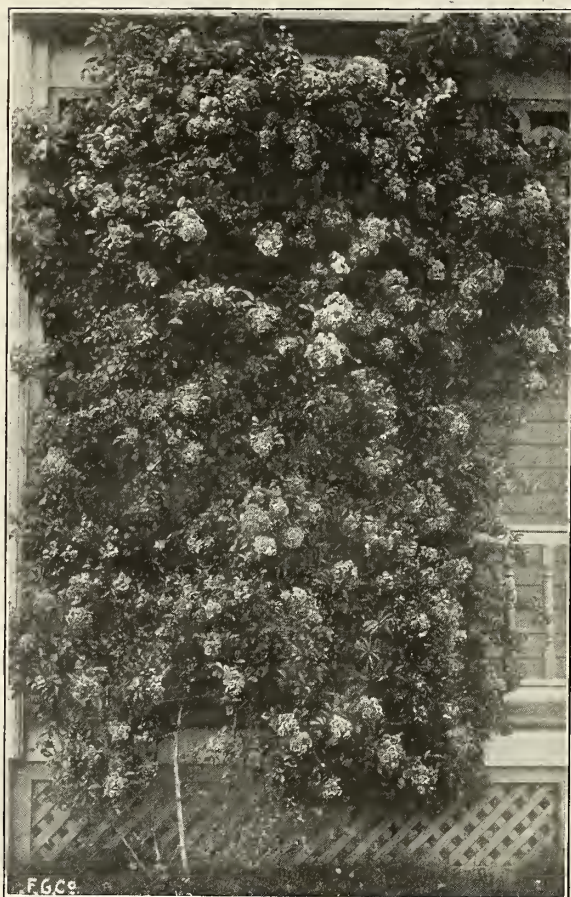
Seven Sisters—One of the best of the old-fashioned sorts; flowers borne in clusters and color varies from dark to light red or pink.



Soliel d'Or



Dorothy Perkins



Crimson Rambler

RAMBLER ROSES

Crimson Rambler—The best-known and most popular of all the climbing roses. A rapid grower, making sometimes 15 to 20 feet in a season; flowers are borne in clusters of 15 to 25 perfectly shaped blossoms of a rich glowing crimson; when in full bloom the vine appears to be a perfect mat of rich red flowers; perfectly hardy everywhere.

Dorothy Perkins—This is one of the new Rambler types; has the same strong habit of growth as the Crimson; flowers are borne in large cluster of 25 to 30 and are a beautiful shell pink; the individual flower is larger than the Crimson Rambler. A valuable acquisition to the climbing roses.

Lady Gay—Another new type fully equal to the Crimson; bud opens, a deep pink, shading to almost pure white when flower is matured; borne in large clusters and very double.

Philadelphia—A splendid climbing rose with flowers more than two inches in diameter; very double, deep rich crimson, more intense than the Crimson Rambler; borne in large clusters completely covering the bush; the flowers hold their color for a long time; vine is very hardy and a strong grower.

Pink Rambler—Flowers are double, of a clear shell pink; borne in large clusters; a valuable rose for cutting.

White Rambler—Flowers are pure white, very double and remain on the vine a long time.

Yellow Rambler—Same as the pink, excepting flowers are a light yellow, changing to straw color; very fragrant.

CLIMBING TEA AND NOISSETTE ROSES

Climbing Meteor—A rich velvety crimson, strong, growing shoots 12 to 15 feet long in a single season; one of the best ever-blooming climbing roses in cultivation.

Marechal Niel—Beautiful deep yellow, large, full and of a globe shape form, very highly perfumed.

William Allen Richardson—Flowers are a beautiful orange-yellow, medium size, very showy and distinct. One of the most valued of the climbers.

HARDY EVERBLOOMING, INCLUDING TEA, CHINA AND BOURBON VARIETIES

Bridesmaid—Clear, bright pink; a constant bloomer, large, full and globular; one of the finest Teas. Very fragrant.

Duchess de Brabant—Flowers a brilliant rosy-pink, round and full; in every way a beautiful rose.

Etoile de Lyon—Said to be one of the best yellow bedding roses; hardy, blooms freely, color a deep yellow; deserves extensive culture.

General McArthur—A new everblooming rose, flowers and buds are extra large, bright glowing crimson-scarlet; a vigorous grower, every shoot producing a flower of brilliant color.

Golden Gate—A beautiful yellow rose, very double and full; fragrant; rich cream-white tinged with golden-yellow; constant bloomer.

Gruss an Teplitz—Flower dark, rich crimson, passing to fiery red as they mature; one of the brightest colored roses, large, full and sweet; vigorous grower and very hardy.

Killarney—One of the most beautiful roses grown, strong, vigorous, perfectly hardy and in every way a rose that should be more cultivated; flowers are very large, buds long and pointed. Color a brilliant shining pink; one of the best Tea varieties.

Liberty—Flowers deep bright crimson-scarlet, very fragrant, a good rose for house culture and cut flowers.

Maman Cochet—This is one of four of the most beautiful roses in cultivation. We have them in all colors, pink, red, white and yellow; very hardy, and exceedingly beautiful.

Marie Van Houtte—Flowers are extra large, very double, full and very fragrant; color a beautiful canary-yellow, passing to cream-white shaded with rich pink.

Papa Gontier—Very large, rich rosy-red, full and sweet. A strong grower and constant bloomer.

Perle des Jardins—One of the most beautiful deep yellow roses in cultivation; flowers extra large, very double and fragrant; color a pure rich golden-yellow.

Souvenir de Pierre Notting—Buds are beautiful long pointed; flowers large, rich orange yel-

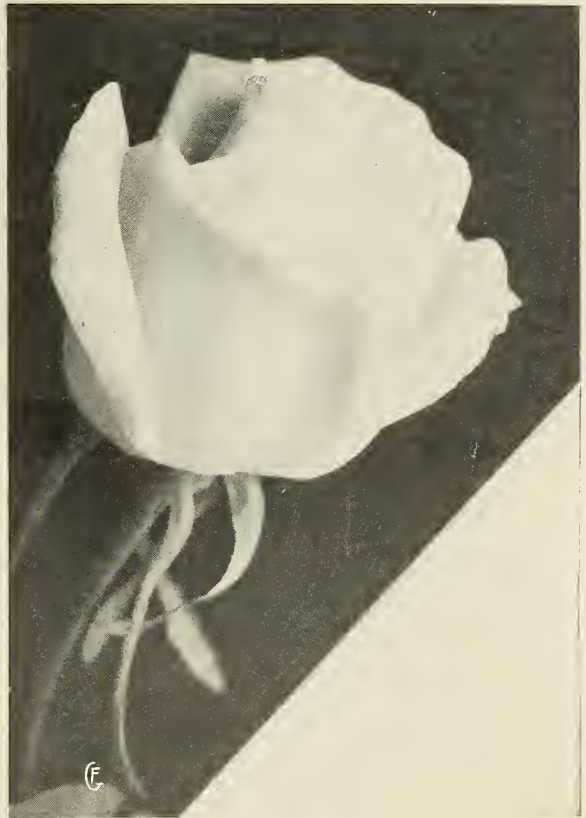
low, flushed with soft carmine-rose; a very beautiful variety.

The Bride—One of the very best pure white ever-blooming roses, extra large, buds and flowers pure cream-white, sometimes tinted with blush.

POLYANTHA ROSES

Clotilde Soupert—Flowers are borne in large clusters all over the bush; large, full and double; very fragrant; beautiful cream-white, tinged with amber at center and clear bright pink.

Crimson Baby Rambler—One of the best hardy bedding roses; vigorous and grow 18 to 24 inches; flowers are borne in clusters of 20 or more to the cluster. Perfectly hardy and is good for pot culture for winter blooming. Color a bright crimson-pink.



Bridesmaid

Pink Soupert—A new ever-blooming rose as beautiful as Clotilde Soupert, but deeper color.

Pink Baby Rambler (Anna Mueller)—Of the same free flowering class as the Crimson Baby Rambler. Blossoms a shade of deep rose with petals curled and twisted, producing a fluffy effect. Hardy, vigorous grower and foliage is very beautiful.

White Baby Rambler—Blossoms all summer and blossoms are produced in great abundance. Cream-white, passing to snow white.

HYBRID TEAS

Auguste Guinnoisseau (White La France)—Flowers extra large, full, pure white, delicate, shaded with soft rose, very fragrant.

Helen Gould (Baldwin)—Flowers very large, perfectly double and very sweet; color a rich bright crimson with beautiful shades of pink; very hardy, strong, vigorous grower and produces great quantities of flowers. One of the very best.

Souvenir President Carnot—Lovely shell-pink, delicately tinted with golden fawn or rich cream white. A very desirable rose.

JAPANESE TRAILING ROSES

Wichuriana Hybrid

Manda's Triumph—Flowers are medium-sized, perfectly double, pure white and very fragrant; plant an erect grower; dark green foliage and is very hardy.

Pink Roamer—Flowers are single, and from two to three inches in diameter; rich pink, with silvery white center and orange red stems; exceedingly fragrant.

South Orange Perfection—Belongs to the Pink Roamer class, and blooms freely in clusters; color rosy blush, changing to white; flowers are perfect rosettes in form.



Killarney



Blanche Moreau

Universal Favorite—Flowers are bright pink, double and in every way equal to the double white varieties.

TREE ROSES

These are grafted on stems from four to five feet high, forming a head that is somewhat tree-shaped. They may be planted in tubs, and make very ornamental additions to lawns, verandas, etc. Can be supplied in leading Hybrid Perpetuals, Crimson Rambler, Baby Rambler, etc.

MOSS ROSES

Blanch Moreau—Pure white, large and full, perfect form and well furnished with deep green moss. Very strong grower.

Captain John Ingram—Dark velvety purple, large size, double.

Countess of Murinais—One of the best pure white moss roses. Flowers large, full and fragrant; a good bloomer.

Crested Moss—Deep pink colored buds, surrounded with a mossy fringe and crest; a very fragrant and beautiful variety.

Glory of Mosses—A moderate grower, flowers very large, color a pale rose.

Henry Martin—Medium size, flowers large and rosy-red, well mossed, fragrant.

John Cranston—Deep crimson; very double.

Luxemberg—Bright crimson, large and beautifully mossed.

Princess Adelaide—Extra large, flowers very double and sweet, color bright rosy-pink; moss a bright green.

Perpetual White—Pure white with a nicely pointed burr. One of the most beautiful white varieties.

Paul Fontaine—Deep crimson; a constant bloomer.

Salet—A bright light rose, large and full. It sometimes blooms in the autumn.

R. var. Mad. Geo. Bruant—Flowers are borne in clusters, buds are semi-double, long and pointed, pure white.

R. var. Blanc Double de Coubert—Purest paper white, blooming in clusters of from five to ten flowers; double, very sweet; a strong, rampant grower, having the true *Rugosa* foliage. Flowers nearly 5 inches in diameter, produced freely and lasting well. Perfectly hardy.

R. var. New Century—Flowers three to four inches across, full and double and borne in large clusters, color a clear flesh pink with bright red center. Has the delightful fragrance of the Sweet Briar.

R. Rubiginosa (English Sweet Briar)—Very highly valued for the delightful fragrance of its young foliage as well as flowers, entirely hardy, and will take care of itself. Makes a fine hedge or is equally good for grouping or single specimens. Flowers are pink.



Paeonies

MISCELLANEOUS ROSES

Harrison's Yellow—Bright golden yellow, very hardy; fine for planting in groups; early bloomer.

Madam Plantier—A pure white rose recommended for lawn and cemetery; plant does not winter-kill and is a strong, vigorous grower and an enormous bloomer.

Persian Yellow—Flowers a deep yellow, rather small, but borne in great profusion. Considered one of the best of the yellow roses.

Rosa Rugosa (var. *Rubra*)—A Japanese variety with flowers of a beautiful bright rose-crimson, single and succeeded by large berries of rich rosy-red. A good hedge rose. Very ornamental.

R. (var. Alba)—Same as above with exception flowers are pure white; very highly perfumed.

R. var. Agnes Emily-Carman—Flowers semi-double and borne in clusters, bright crimson and a free and continuous bloomer.

HERBACEOUS PAEONIES

The Paeonias are recognized as a fine effective flower. They are extremely hardy and easily cultivated. The flowers are lasting and many of them are finely finished and exquisitely colored. No other hardy plant of our gardens thrives so well, nor has as much practical, permanent value.

In planting paeonias for cut-flowers, do not plant a long list of varieties. For good results they must be cut at just the right time, which is hard to do if you have too many different varieties.

Andre Lauries—Rosy-red, of fair size and shape, fragrant, healthy, vigorous, free bloomer, long stems; much used for cut-flowers.

Boadicea—White, carmine markings, fine flower.

Canisto—Creamy white.

Compte de Jussier—Delicate pink border, dark creamy center.

- Delicatissima**—Delicate fine rose; very large, full and sweet.
- Duc de Gazes**—Dark rose, center petals whitish.
- Duke of Wellington**—Ivory white, with creamy center; very large and double.
- Elegans**—Dark pink, salmon center.
- Festiva Alba**—Creamy white flower, a few petals spotted carmine, rather a dwarf grower.
- Festiva Maxima**—Large full double bloom, color pure white with an occasional carmine spot, strong grower, one of the best of the white varieties.
- Fragrams**—Light pink.
- Francis Ortegal or Francois Ortegat**—Brilliant crimson, large fine bloom, double and sweet.
- Fulgida**—Purplish red, a good sort.
- Golden Harvest**—Probably the nearest approach to a yellow paeonia, large tri-colored blooms, creamy-pink, fading to white.
- Grandiflora**—Bright flesh or pink, very large, late.
- Grandiflora Rubra**—Extra large, blood red, very double.
- Independence**—Tall, fine pure white.

- Mme. Furtado**—Large double white, similar to Festiva Maxima.
- Magnifica**—Pink outer petals, center white.
- Marie Lemoine**—Delicate flesh, shading to ivory white, at times a light carmine tracing on edge of petals, center white.
- Officinalis Mutabilis Alba**—Soft pink, changing to pure white, early.
- Officinalis Rosea fl. pl.**—Beautiful clear pink, double, early.
- Officinalis Rubra pleno**—Rich deep crimson, very early and one of the brightest of all dark colored varieties.
- Paul Neyron**—Rose-pink.
- Pottsi**—Dark crimson, with yellow stamens; early.
- Reevesii**—Delicate rose, fringed center.
- Reine Hortense**—Soft pink, late.
- Tenufolia, fl. pl.**—Double scarlet flowers; foliage fern-like; very early.
- Whitleyi (Queen Victoria)**—White with cream center, the best commercial white offered, as it will out-keep any other; blooms mid-season.

HARDY PHLOXES.

Phlox Paniculata

No class of hardy plants is more desirable than the Perennial Phloxes. They will thrive in any position, furnishing a mass of charming flowers from June till November; being in the fullness of their beauty when other flowers have passed away. Different colors should be planted in large groups or borders to get the best effect.

- Athis**—A very strong and vigorous pink.
- Belvidere**—Bright, lively, early pink.
- Bridesmaid**—Large white florets with crimson eye.
- Chameleon**—Varies from rosy-scarlet to deep rose.
- Coquelicot**—Pure scarlet, with crimson eye.
- Charlotte Saisson**—White, suffused crimson; tall.
- Diplomat**—Large, lilac, with crimson eye.
- Etna**—The best tall crimson double.
- Independence**—Tall, fine pure white.
- Iris**—Purple blue.
- Jacinda**—Large lavender.
- Lothair**—Bright, dazzling crimson.

Maculata—This is a grand acquisition to the Hardy Phlox. No collection is complete without it; tall, bright rosy-crimson, one of the showiest for permanent borders, glossy foliage, always clean and bright; should be in every collection.

Pantheon—Rosy-salmon; very large.

Perfection.

Prime Minister—Rosy-white, with center of deep rose.

Pyramidalis—Extra early, white.

Queen—Pure white, fine.

Snowflake—Pure white.

The Pearl—Extra fine pure white.



Hardy Phlox

- Isabelle Kartlizka**—Large delicate rose-pink, a fine flower.
- James Vick (Terry)**—Broad outer petals; fine brilliant crimson, medium early.
- Jupiter**—Deep purplish rose, large, early.
- Lady Bramwall**—Light pink, very fine bloom.
- L'Esperance**—Beautiful rose-pink, good size and form, a very fragrant flower and one of the earliest; strong, vigorous, hence an excellent cut-flower.
- La Martine**—Bright red.
- Louis Van Houtte**—Dark crimson, very compact, one of the best of its color.

HARDY PERENNIAL PLANTS

The following collection embraces the most desirable varieties. They are all showy, of easy cultivation and the flowering season is from May to November. By a careful selection a continuous display of flowers may be had the entire season. If you desire we can make selection for you.

Achillea, The Pearl—Has very showy heads of pure white, double flowers, on strong, erect stems; 2 feet high; blooming constantly.

Alyssum, Golden Tuft—A fine border plant, not over 12 inches high, which bears numerous clusters of bright yellow flowers in May, similar in shape to the well-known Sweet Alyssum.

Anemone, Windflower—One of the most showy of all our autumn-blooming herbaceous plants. Blooms freely from August till cut down by frost. In somewhat moist, rich soil, the plants make a beautiful, hardy border or bed. A slight covering of leaves or straw is sufficient protection in most severe winters.

Aquilegia, Columbine—These are plants of elegant habit, distinct in foliage and flowers. The latter form a showy crown well above the clear cut leaves. All the species like partially shaded, well-drained soil. One of the best plants for rock-work, or growing under trees.

Astilbe, Spirea—A beautiful herbaceous plant, blooming in dense spikes of pure white feather-like flowers.



Shasta Daisy (See page 64)

ASTERS

Michaelmas Daisies—Tall, leafy perennials, blooming in the fall when flowers are scarce.

Alpine Asters—A rich purple.

Italian Starwort—Light blue.

Nevadensis (A. Coccineus)—Red, yellow center.

Nevadensis (A. Lilacinus)—Lilac.

New England Aster—Bluish purple.

Bocconia Cordata (Plume Poppy)—Stately, growing from 6 to 8 feet high, with large foliage and long spikes of white flowers in August.

Boltonia (Asteroides)—Tall, 4 feet or more in height, with white, aster-like flowers in broad heads during August. A handsome plant for borders and masses.

Boltonia (var. *Latisquama*)—Aster-like flowers in a broad head; rosy purple; free blooming, showy and fine; 5 feet; July to October.

Campanula, Bellflower (Harebell)—A beautiful plant; a large number of varieties in the richest colors, profuse bloomers, and require little attention.

Campanula, Bellflower (Harebell)—A lovely, hardy little perennial, widely planted everywhere for its delicate sprays of drooping white bells and their delightful fragrance. The leaves are a rich dark green; the plant vigorous, soon forming fine clumps which bloom early in the spring; largely forced in winter.



Funkia (See page 64)

Coreopsis (Tickseed)—Showy and valuable free flowering perennials. Produces bright golden yellow flowers in great profusion the entire season.

Chrysanthemum (Hardy Pompon)—This class of beautiful plants is now so universally popular for out-door bedding, and justly so. They produce a lavish profusion of blooms, giving color, life and beauty to the garden at a time when other plants have been nipped by frost. They are quite hardy, but it is well to give a slight covering of leaves or manure during winter. Grow from 2 to 3 feet high.

Daisy, Shasta—Large snowy-white flowers, 4 inches across; in bloom all summer; a good cut-flower variety.

Delphinium (Larkspur)—The hardy Larkspurs are one of the most important and most satisfactory plants in the herbaceous garden, and should be planted extensively, even in the smallest garden. Their long spikes of flowers are produced continuously from June until late in the fall, if the precaution is taken to remove the flower stems before they can produce seed.

Desmodium (Penduliflorum)—A beautiful Japanese perennial, with clover-like foliage and long, pendulous racemes of rosy-purple flowers. The stems are 4 feet long, and in early autumn are literally loaded with the flowers. Very hardy and showy, and a fine plant for growing in front of shrubbery.

Dianthus (Sweet William)—The old-time favorite, growing $1\frac{1}{2}$ to 2 feet high, and bearing during May and June a profusion of round-topped clusters of flowers of all shades of red and pink to white.



Hollyhocks (See page 65)

Dicentra (Bleeding Heart)—A hardy perennial with heart-shaped, rose colored flowers in drooping spikes. One of the best border plants; perfectly hardy and easily cultivated. Flowers in April or May.

Digitalis (Foxglove)—Long bell-shaped flowers, on stems 3 to 4 feet high; white and red; very showy. July to September.

Funkia (Day Lily)—A superb autumn flower, having broad, light green leaves, prettily veined, and long, trumpet-shaped, pure white flowers, that possess a delightful, though delicate fragrance.

Gaillardia Grandiflora (Blanket Flower)—A showy plant with dense tufts of drooping leaves and flower stems, producing daisy-like blossoms 2 to 3 inches across, of gorgeous colors; blooms in the most wonderful profusion from June to November.

Gypsophila Paniculata (White Veil Flower)—Two to three feet in height and most graceful in effect, with list-like white flowers that are popular for cutting, as they give an air of grace and harmony to any arrangement. Blooms July to September.

Helianthus (Sunflower)—One of the showiest of the hardy perennials. Flowers are large and vary in color from light to deep orange-yellow; stalks are tall and graceful.



Iris, Kaempferi (See page 65)



Rudbeckia

Hibiscus (Militaris)—Strong growing, 4 to 6 feet high, with white, blush, or pale rose flowers, with purple eye; blooming in August and September.

Hibiscus (Crimson Eye)—Immense flowers of purest white, with large centers of velvety crimson. Blooms very profusely, the plants being covered all summer with a wealth of most beautiful, attractive flowers.

Hollyhocks—Few hardy plants combine as many good qualities as the Hollyhock. For planting in rows or groups on the lawn, or for interspersing among shrubbery, they are invaluable. The flowers form perfect rosettes of the most lovely shades of yellow, crimson, rose,

pink, orange, white, etc. The Hollyhock requires a rich, deep soil, well drained and will repay in quality and elegance of bloom any extra care. A slight protection in the winter will be beneficial.

Hyacinthus (Candicans)—A magnificent yucca-like plant producing in July and August, a flower stem 3 to 4 feet high, covered with from 20 to 30 pure white, pendent, bell-shaped flowers.

Iberis Sempervirens (Candytuft)—Of spreading habit; flowers pure white, covering the plant with bloom. One of the finest border plants, beautiful with flowers very early in spring; good for cutting.

Iris Germanica (German Iris)—This group blooms in May with wonderful combinations of coloring; leaves broad sword-like. We have an assortment of the best sorts.

Iris Kaempferi (Japan Iris)—The Japanese Iris should be planted in a somewhat cool, moist situation, and in rich soil. Its flowers, in late June and July, are quite distinct from those of all the varieties, and will compare favorably with some of the exotic orchids. We have a good assortment of the best varieties.

Myosotis (Forget-Me-Not)—The Forget-Me-Nots are familiar flowers of many gardens, hardy, easy to grow, with bloom sprays of exquisite blue.

Papaver (Poppy)—Nothing can equal these in gorgeous effect, and, whether planted singly or in masses, their large flowers, rich brilliant colors, and freedom of bloom render them conspicuous in any position.

Platycodon (Chinese Bell-Flower)—A valuable perennial, forming a dense branching bush of upright habit, 1 to 2 feet high, with neat foliage. From the middle of July until late September it bears a constant succession of handsome, large bell-shaped, deep blue flowers. Succeeds well in any ordinary soil.

Rudbeckia (Golden Glow)—A distinct, tall-growing, hardy perennial, from 6 to 7 feet high. Foliage deeply cut, handsome bright green; flowers very double, rich golden-yellow; 2 to 3 inches in diameter; borne on long, smooth stems, forming for the tall plant a solid head of bloom.



Yucca (See page 66)

Salvia (Meadow Sage)—A handsome species of the well-known Sage, with a profusion of crimson flowers in August and September.

Stokesia Cyanea—A grand large flowered, hardy perennial, growing 18 to 24 inches high, and covered with centaurea-like flowers of a beautiful lavender-blue shade, and often 4 to 5 inches across. Of earliest possible culture, flourishing wherever given an open, sunny exposure. As a single specimen plant, used in mixed borders or in large masses by itself, it is equally valuable, and by its use, some very effective planting may be worked out. Blooms from July to October continuously.

Tritoma (Red-Hot Poker)—These are tall and striking plants of much beauty when well placed and properly grown. The great spikes of flowers sent up from the center of a broad circle of green leaves, have quite a rich and



Crocus

tropical appearance. Give some protection in cold climates. Bloom from July to September.

Yucca, Filamentosa (Adam's Needle)—Very conspicuous plant. The flower stalks 3 and 4 feet high are covered with large, whitish, bell-shaped flowers.

HARDY BULBS FOR FALL PLANTING

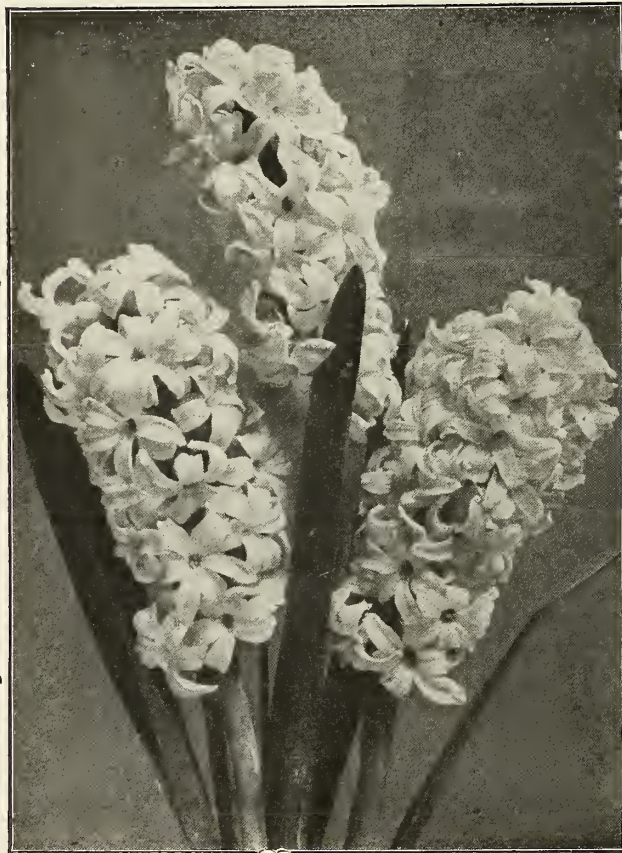
Crocus—These are delicate and tasteful in form and varied and gay in color. Until the flowering of the Hyacinth, and through the most changeable and unpleasant of the spring weather, the garden depends almost alone upon the Crocus for its brightness. Plant the bulbs in autumn about 3 inches apart and cover with 2 inches of soil. Cover in fall with a little straw or coarse manure to keep the bulbs from being thrown out by frost.

Freesia (*Refracta Alba*)—Bears clusters of pretty white flowers of the most delicious fragrance. Early spring.

Galanthus (Snowdrop)—This is the earliest of spring-flowering bulbs, is universally admired for its elegant, snow-white, drooping blossoms. Plant thickly in groups in some sheltered spot, and the flowers will surprise you before the snow is all gone.

Hyacinths—Among all the bulbs used for winter flowers, the Hyacinth stands foremost. Flowers may be produced by placing the bulbs in a glass filled with water or placed in pots or boxes in soil; colors, blue, red, white, with various shades.

Jonquils—Sweet scented, yellow. It is one of the early blooming bulbs.



Hyacinths

LILIES. *Lilium*

No class of plants capable of being cultivated out-of-doors possesses so many charms; rich and varied in color, stately and handsome in habit, profuse in variety, and of delicious fragrance, they stand prominently out from all the other hardy plants. Lilies thrive best in a dry, rich soil, where water will not stand in the winter. After planting they require very little care, and should not be disturbed for several years. Established plants bloom more freely than if taken up annually. Plant in groups of five or six, or in large beds.

Lilium Auratum (Gold Band or Lily of Japan)—Flowers very large, delicate ivory-white, thickly dotted with rich, chocolate-crimson spots. A bright golden band runs through the center of each petal. The finest of all lilies.

Lilium Harrisii (Bermuda Easter Lily)—Flowers large, trumpet-shaped, pure waxen white, gracefully formed and delightfully fragrant. The ease with which it can be forced into flower in winter has made it wonderfully popular.

Lilium Longiflorum—Large, snow-white, trumpet-shaped; very fragrant.

Lilium Melpomene—Flowers large and abundant; rich blood-crimson; heavily spotted.

Lilium Tigrinum (Double Tiger Lily)—Orange-scarlet, with dark spots.

Lilium Speciosum—White, shaded with rose, spotted red.

Lilium Speciosum Album—White, with a slight rose tint on the ends of the petals.



Lilies



Narcissus

**NAR-
CISSUS**

Some varieties bloom as early as the Crocus. The flowers assume many forms and present many charming combinations of white, gold, primrose, orange, sulphur and pure yellow. Some are quite fragrant; all are very hardy, except the clustered Polyanthus. Double and single.

TULIPS

These are the most glowingly brilliant and effective of all the early spring flowers. Plant them thickly and lavishly in the fall, and they will award you with abundant cheer during the cold, dull months of early spring. Colors many. Double and single.

BULBS AND TUBERS

For Spring Planting

Amaryllis—Velvety crimson flowers early in summer. Planted out in May in rich ground. The roots are stored like Dahlias during winter.

Begonias—They make a brilliant show all summer, bedded out in rich, well-drained soil, preferring a position where they will be protected from the direct rays of the sun during the hottest part of the day. They also make handsome pot plants for the conservatory or window.

Caladium Espulentum (Elephant's Ear)—For obtaining tropical effects in lawn and garden planting, this beautiful plant takes a prominent place. Grows well in any ordinary soil, but should have plenty of water and good rich soil to obtain best results. Bulbs must be taken up in fall and kept in a dry, warm place.



Dahlias



Gladioli (See page 69)

Cannas—Very attractive plants, with large green leaves, often shaded with red and crimson. Cannas are the most satisfactory plants one can use for producing a gorgeous display of brilliantly colored flowers all summer long; they bloom until frost.

Dahlias—These showy and pretty flowers are becoming very popular and justly so. The Dahlia is one of the showiest of all fall flowers, commencing to flower in July, they are a perfect bloom until stopped by frost. Flowers are most perfect and of beautiful form. Dahlias are divided in classes as follows: Cactus, Decorative, Show, Fancy, Pompon, Single, Collarette and Seedling; each class is comprised of a number of different va-

rieties. Colors numerous. Before freezing weather, dig and store in frost-proof cellar.

Gladioli—The Gladioli is the most attractive of all the summer flowering bulbs and deserves a place in every garden, as it is sure to flower and do well with little care. Flowers are of most every desirable color. By cutting the spikes when two or three of the lower flowers are open and placing them in water, the entire spike will open beautifully. Plant bulbs in April or May for early, and late in June for fall blooming.

Tuberose—One of the best known and most easily grown summer flowering bulbs. Easily recognized by its exquisite fragrance and beautiful flower spikes, which are borne on long stems, making it an admirable cut-flower for house decoration.



Bed of Tulips

See Page 72 for General Index

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SPRAYING CALENDAR AND FORMULAS

Insect or Disease	Plant Attacked	What to Spray With	First Spraying	NOTES
1 Codling Moth	Apple, Pear	Arsenate of lead	While the last blossoms are falling. Spray with force directly into every flower. Use a Bordeaux nozzle.	Repeat one week later in the same way. If necessary a third time four weeks after the first worms appear under the bands, and a fourth four weeks later.
2 San Jose Scale	Nearly all deciduous trees..	Sulphur-lime wash	In the spring before the buds burst.	After the eggs under the scales hatch (May 15 to June 15) spraying with kerosene emulsion, 1 part to 10 parts water, or whale-oil soap, 1 lb. to 5 gals. water, is effective.
3 Oyster Shell Bark Louse	Apple, mainly	Sulphur-lime wash	When the leaves are off the trees..	Arsenate of lead may be used in the summer when the worms appear.
4 Peach Worm or Twig Borer	Peach, sometimes Plum, Apple and Cherry	Sulphur-lime wash	Just as the buds swell in spring....	Or arsenate of lead just as the buds open in the spring. Repeat in one week.
5 Bud Moth	All orchard trees	Sulphur-lime wash	Just as the buds are swelling.....	Kerosene emulsion is effective when insects appear. Repeat before the leaves curl if necessary. Cutting off twigs covered with eggs in winter usually suffices for young trees.
6 Green Aphid	Apple, Plum, Prune	Sulphur-lime wash	When the leaves are off the trees..	For the root form, when present, remove the soil and treat with finely ground tobacco placed around base of tree; use 2 to 5 lbs. to a tree.
7 Black Aphid	Cherry and Peach	Kerosene emulsion or whale oil soap emulsion, 1 part to 12 parts water.....	When the insects appear and before they curl the leaves.....	Repeat if necessary.
8 Woolly Aphid	Apple	Kerosene emulsion, 1 part to 12 parts water.....	When the insects appear	Make dust of 1 part paris green, 25 parts bran or flour. Repeat if necessary.
9 Aphid	Hop, rose, house plants, etc.	Whale oil and quassia	When the insects appear	Or dust with lime, road dust or ashes.
10 Cabbage Worm	Cabbage, Cauliflower	Paris green dust	Before the worms eat into cabbage.	This will kill the winter eggs. If the mite appears in summer, use kerosene emulsion, beat adding 1 oz. of sulphur to the kerosene for each gallon of spray.
11 Cabbage Aphid	Turnip, Cabbage	Kerosene emulsion	Just as soon as the insects appear..	Dig out worms in fall and spring with a knife. During the growing season whitewash base of trunk.
12 Slug	Pear, Cherry	Arsenate of lead	When the insects appear	During the growing season whitewash base of trunk. Dig out worms in fall and spring with a knife.
13 Red Spider	Fruit trees and bushes	Sulphur-lime wash	When the leaves are off the tree....	Add more soap than the formula calls for. Repeat 10 to 12 days later if necessary.
14 Blister Mite	Pear Leaf	Sulphur-Lime Wash	When the leaves are off the tree....	
15 Peach Tree Borer	Peach, Prune	
16 Flathead Borer	Apple, mainly	
17 Cottony Scale	Pear, Currant, Poplar, etc..	Kerosene Emulsion.....	When insects become cottony (May)	
18 Scab	Apple, Pear	Bordeaux	Just before the blossoms open	Again while the last blossoms are falling. Use a vermorel nozzle. Do not drench the trees.
19 Blackspot Canker	Apple	Bordeaux, double strength.	Immediately after the leaves fall...	Again three weeks later.
20 Brown Rot or Fruit Mold	Plum, Cherry, Peach	Bordeaux	Just before the blossoms open	Again just after blossoms fall. Spray a third time, just as fruit begins to ripen, with copper acetate, 8 oz. to 50 gals. water. Before first spraying gather and burn mummified fruits. Thin green fruit so that they are open to admit much sunlight.
21 Leaf Curl	Peach	Sulphur-Lime Wash.....	Just before the buds open.....	
22 Peach Mildew	Peach	Sulphur-lime wash	Before buds burst.....	

23 Gooseberry Mildew	Gooseberry	Potassium sulphide, 1 oz. to 2 gal. water	Just as buds burst.....	Repeat at intervals of 10 days till fruit is picked.
24 Scab	Potato	Formalin, 1 lb. to 30 gal. water	Soak seed for two hours, then cut and plant. Do not plant in soil where scabby potatoes were grown. Again two weeks later. If blight is bad on unsprayed potatoes near by, follow with a third application two or three weeks later.
25 Potato Blight	Potato	Bordeaux	July first to fifteenth.....	Again three weeks later. Follow with a third spraying three weeks later. Before planting seed reject all diseased ones.
26 Anthracnose	Bean	Bordeaux	When plants are well started	Sprinkle the seed thoroughly; let it lie in a pile two hours; dry and plant with a clean seeder.
27 Smut	Wheat and Oats	Formalin, 1 lb. to 45 gal. water	
28 Moss and Lichens	Fruit trees	Lye or sulphur-lime, double strength	When the leaves are off the trees..	

BORDEAUX MIXTURE

Bluestone	6 pounds
Good Lime	4 pounds
Water	50 gallons

Dissolve the bluestone by suspending it in a sack in 25 gallons of water in a barrel. Slake the lime in another vessel, adding water slowly to make 25 gallons of lime milk. Pour the two at the same time slowly into a third vessel, allowing them to mix thoroughly as they are poured in. Many orchardists now use only 4 pounds of bluestone to make this mixture.

If there is not enough lime in the water it will burn the foliage. To test this, take a saucer full of the mixture and add a few drops of a solution of yellow prussiate (ferrocyanide) of potash (one ounce to one-half pint of water). If a brown color appears, more lime must be added until no change takes place, when the test is applied. Even the best bordeaux may scorch the fruit if applied in rainy weather.

ARSENATE OF LEAD

Arsenate of lead.....	1 pound
Water	40 to 50 gallons

It is unnecessary to use it stronger. It is more reliable than paris green. It is espe-

cially useful where there is much rain. It sticks well and does not scorch the leaves.

SULPHUR-LIME WASH

Sulphur	12 pounds
Good Lime	12 pounds
Water	45 gallons

First slake the lime in the cooking vat. When slaked add the sulphur and about ten gallons of water, so that the mixture will boil easily. Keep it well stirred until boiling begins. Boil until the sulphur is completely dissolved, which usually takes less than an hour. Then add the rest of the water, and the mixture is ready to spray. It should be poured into the spraying tank through a strainer. It may be hot or cold. Salt, which was formerly added to this mixture, is wholly unnecessary. There are several ready-made sulphur-lime washes which give good results when properly diluted.

WHALE OIL AND QUASSIA

Quassia chips	8 pounds
Whale oil soap.....	7 pounds

Soak the chips twelve hours in eight gallons of water. Dissolve the soap in boiling water. Strain the quassia extract to remove the chips, and add the soap solution. Stir thoroughly and dilute to make 100 gallons.

This solution is used almost exclusively for the hop aphids. It is almost as effective without the quassia against other species of aphides. Soap powders may be used in the same proportion without the quassia for most aphides.

KEROSENE EMULSION

Kerosene	2 gallons
Whale oil soap.....	½ pound
Water	1 gallon

Dissolve the soap in the water by boiling, and add the suds boiling hot to the kerosene, away from the fire. The mixture is then to be agitated violently, preferably by pumping it back on itself with a force pump. After four or five minutes the mixture suddenly becomes creamy in consistence. If well made, the cream will stand for a long time without free oil rising to the surface. Unless otherwise stated, use one gallon of the emulsion to 12 gallons water in spraying. One quart soft soap or one pound laundry soap may be used instead of the whale oil soap.

LYE

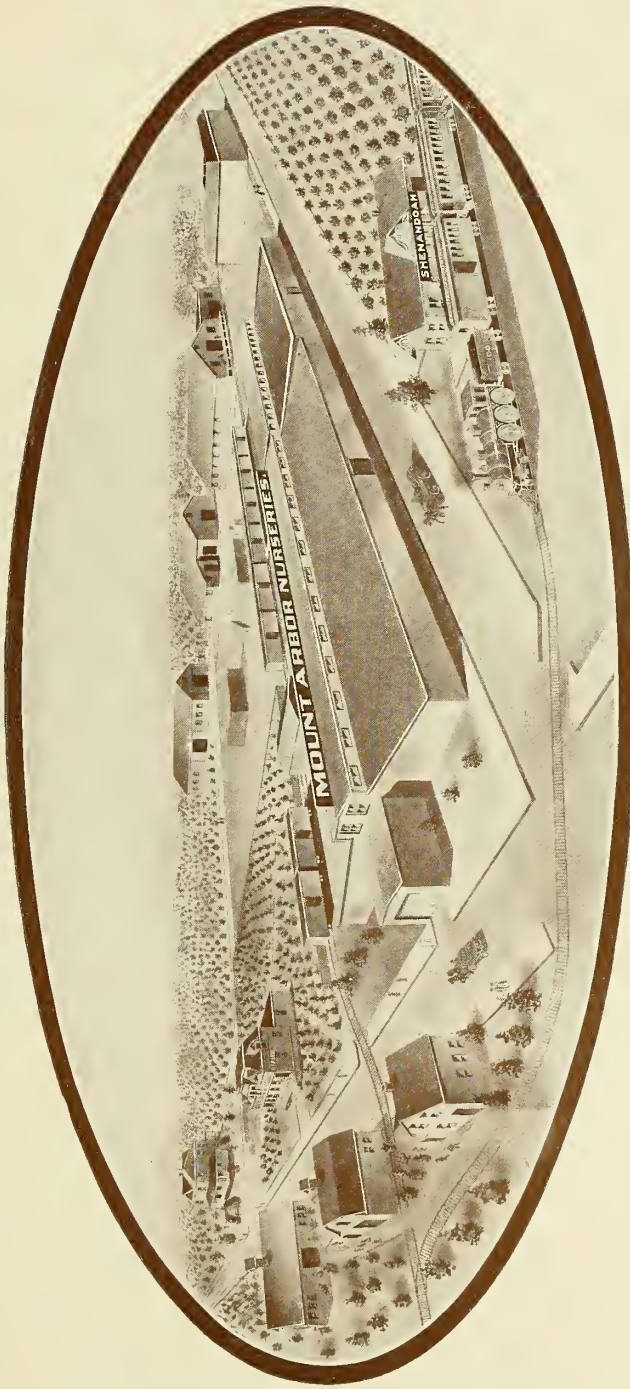
Lye (potash)	½ pound
Water	10 gallons

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Asilbe	63			Mahonia	48	Silk Vine	54
Azalea	44	E		Maple, Ash Leaved	38	Silver Bell Tree	46
		Elder	46	Norway	38	Smoke Tree	48
B		Eleagnus	38-46	Schvedler's	38	Snowball	49
Balm of Gilead	39	Elephant's Ear	68	Silver Leaved	38	Snowdrop	66
Barberry	44, 54	Elm, Am. White	36	Sugar	38	Snowberry	49
Basswood	37	Camperdown	40	Sycamore	38	Sorbus	36
Beech, Amer.	35	Huntingdon	36	Weir's C. L.	28	Spirea	50
Purple-leaved	35	Red or Slip	36	Meadow Sweet	50	Spraying Calendar	70, 71
Bechtel's Flowering		Evergreens	41	Mock Orange	50	Spruce, Black Hills	42
Crab	36	Exochorda	46	Mt. Ash, European	38	Colorado	42
Begonias	68			Oak Leaved	38	Douglas	43
Bellflower	63	F		Weeping	40	Engelmann's	43
Berberis	44, 54	Fagus	35	Mulberry	25, 40	Hemlock	43
Betula	35, 40	Fir, Balsam	42	Iowa Weeping	40	Koster's	43
Blignonia	52	Concolor	42	Russian	25	White	43
Birch, Eu. Wh.	35	Flowering Locust	43	Tea's Weeping	40	Starwort	63
Birch, Pur.-Lvd.	35	Forget-Me-Not	65	White	25	Stokesia	66
C. L. Weep.	40	Forsythia	46	Myosotis	65	Strawberries	31, 32
Bittersweet	53	Foxglove	64			Sumach	49
Blackberries	31	Fraxinus	35	N		Sun Flower	64
Bladder Senna	45	Freesia	66	Narcissus	67	Sweet Tea Shrub	45
Blanket Flower	64	Fruit Department	9-33	Nectarines	25	Sweet-Scented Shrub	44
Bleeding Heart	64	Funkia	64	Nettle Tree	36	Sweet William	64
Boltonia	63	G		Notice to Customers	2	Sycamore, American	40
Boston Ivy	52	Gaillardia	64	No. of Plants to Acre	8	Ortental	40
Box	54	Galanthus	66	Nut Trees	25, 26	Symphoricarpus	49
Boxus	54	Ginkgo	40	O		Syringa	47, 48, 50
Buckthorn	44	Gladiolus	69	Oak, Pin	38		
Bulbs	66-69	Gleditsia	37, 54	Red	38	T	
Bush Honeysuckle	46	Globe Flower	47	Scarlet	38	Tamarix	51
Butternut	25	Golden Bell	46	Olive	38	Tecoma	52
Button Bush	45	Golden Glow	65	Ornamental Dept.	34-69	Thorn, Paul's Double	40
		Gooseberries	30, 31	Ornamental Shrubs	43-51	Scal	40
C		Grapes	27, 28	Osage Orange	54	Double Pink	40
Caladium	68	Gymnocladus	36			Double White	40
Calycanthus	44	Gypsophila	64	P		Thuya	41
Campanula	63			Papaver	65	Tilia	37
Candytuft	65	H		Peaches	19-21	Tree of Heaven	35
Cannas	68	Hackberry	36	Pears	17, 18	Tritoma	66
Caragana	44	Halesia	46	Pearl Bush	46	Trumpet Creeper	52, 53
Catalpa, Bungei	35	Hawthorne, English	40	Pecans	26	Tuberose	69
Speciosa	35	Hedge Plants	54	Peonies	61, 62	Tulips	68
Celastrus	53	Hedra	53	Perennial Plants	63-66	Tulip Tree	40
Celtis	36	Helianthus	64	Periploca	54		
Cephalanthus	45	Hemlock	43	Persimmon	39	U	
Cerasus	35	Hibiscus	43, 65	Philadelphus	50	Ulmus	36, 40
Cercis	39	High Bush Cranberry	49	Phlox	62		
Cherries	23, 24, 35	Hollyhocks	65	Picea	42	V	
Chestnut, A. Sweet	25, 35	Honeysuckle	46, 53	Pie Plant	33	Varnish Tree	37
Double Flowering	35	Hyacinthus	66	Pine, Austrian	42	Viburnum	49
Horse	35	Hyacinthus	65	Black	42	Vines	52-54
Ohio Buckeye	36	Hydrangea	47	Bull	42	Virgin's Bower	53
Red Flowering	36			Jack	42	Virginia Creeper	52
White Flowering	35	I		Scotch	42		
Chrysanthemum	64	Introduction	3	White	42	W	
Chinese Bell Flower	65	Instructions for	4-8	Pinus	42	Walnut, Black	26
Chionanthus	51	Planting	4-8	Plane Tree	40	Cordiformis	26
Cinnamon Vine	53	Iris	65	Platanus	40	Sieboldiana	26
Clematis	53	Ivy, Amer.	52	Platyodon	65	White	25
Climbing Vines	52-54	Boston	52	Plums	21, 22	Weeping Trees	40
Columbine	63	Engelman's	52	Double Flowering	48	White Fl. Cherry	35
Colutea	45	English	53	Purple Leaved	39	White Fringe Tree	51
Compass Cherry-Plum	24	J		Poplar, Bolle's Silver	39	Wiegelia	51
Convallaria	63	Japanese Sil. Thorn	46	Carolina	39	Willow, Am. Weeping	41
Coral Berry	49	Japan Quince	47, 54	Lombardy	39	Babylonian Weep'g	41
Corchorus	67	Jonquills	66	Norway	39	Golden	40
Coreopsis	44	Judas Tree	39	Silver Leaved	39	Kilmarnock	41
Cornus	36, 46	Juniperus	42	Populus	39	Laurel Leaved	40
Crab Apples	16, 17	Juniper, Irish	42	Poppy	65	Wisconsin	41
Bechtel's	36	Savin	42	Privet	49	Windflower	63
Crataegus	40	Swedish	42	Prunus	39, 48	Wistaria	54
				Purple Fringe Tree	48	Woodbine	52
				Pyrus	36, 40	Y	
						Yucca	66



Bird's-eye View of Mount Arbor Packing Plant and Grounds.



MOUNT ARBOR NURSERIES
Shenandoah, Iowa